Commonwealth of Kentucky
Natural Resources and Environmental Protection Cabinet
Department for Environmental Protection
Division for Air Quality
803 Schenkel Lane
Frankfort, Kentucky 40601
(502) 573-3382

Title V
AIR QUALITY PERMIT
Issued under 401 KAR 52:020

Permittee Name: **Dow Corning Corporation**
Mailing Address: **P.O. Box 310**
Carrollton, Kentucky 41008

is authorized to operate a silicone-based synthetic organic chemicals manufacturing plant

Facility Name: **Dow Corning Corporation**
Mailing Address: **Same as above**
Facility Location: **4770 US Highway 42**
Carrollton, Kentucky 41008

Permit Number: **V-99-050 (Revision 1)**
Log Number: **53629, 53447**
Review Type: **Title V, Early Reductions, NSR, NSPS, MACT**
Source ID #: **21-041-00004**

Regional Office: **Florence**
County: **Carroll**

Application
Complete Date: **April 27, 2001**
Issuance Date: **November 1, 1999**
Revision Date: **November 5, 2001**
Expiration Date: **November 1, 2004**

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John E. Hornback, Director
Division for Air Quality

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Rev #	Permit type	Log #	Complete Date	Issuance Date	Summary of Action
----	Initial Issuance	E805	10/5/00	11/1/99	
1	Minor revision	53447*	--	11/5/01	Replace L-2 Furnace Insignificant Activity
1	Significant revision	53269*	4/27/01	11/5/01	5900 Materials through DPR Quench Vessel and replace T10 Thermal Oxidizer

* Permit shield applies to this revision

SECTION A - PERMIT AUTHORIZATION

Pursuant to a duly submitted application which was determined to be complete on February 14, 1997, the Kentucky Division for Air Quality hereby authorizes the construction and operation of the equipment described herein in accordance with the terms and conditions of this permit. This permit has been issued under the provisions of Kentucky Revised Statutes Chapter 224 and regulations promulgated pursuant thereto and shall become the final permit unless the U.S. EPA files an objection pursuant to Regulation 401 KAR 50:035, Section 21(3).

The permittee shall not construct, reconstruct, or modify any affected facilities without first having submitted a complete application and receiving a permit for the planned activity from the permitting authority, except as provided in this permit or in the Regulation 401 KAR 50:035, Permits.

Issuance of this permit does not relieve the permittee from the responsibility of obtaining any other permits, licenses, or approvals required by this Cabinet or any other federal, state, or local agency.

SECTION B - EMISSION POINTS, AFFECTED FACILITIES, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS - CONTENTS

Section B consists of the following subsections:

SECTION B - EMISSION POINTS, AFFECTED FACILITIES, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS

(1) UTILITIES - BOILERS:

EIS No.	Dow Vent ID	Boiler ID	Make/Model	Date of construction	Maximum Rated Capacity (Fuels used)
	U.01	703*	Zurn Eric City, #22M Keystone Model SAOH-MJ-DAR-36	09/01/87*	176.8 mmBTU/hr (Natural Gas) 167.1 mmBTU/hr (Fuel Oil #2, #6)
	U.02	766	Zurn Package Water Tube Boiler	11/01/90	97.0 mmBTU/hr (Natural Gas, Fuel Oil #2)
	U.03	600	Combustion Eng., Inc.	1966	58.0 mmBTU/hr (Natural Gas, Fuel Oil #6)
	U.04	601	Combustion Eng., Inc.	1966	58.0 mmBTU/hr (Natural Gas, Fuel Oil #6)
	U.05	657	Riley Type PS-23-57	1970	60.0 mmBTU/hr (Natural Gas, Fuel Oil #6)
	U.11	767	Nebraska Model NSX-G-117	01/01/96 12/01/97 (Proposed)	179.25 mmBTU/hr (Natural Gas) 179.25 mmBTU/hr (Fuel Oil #2)

*The 703 boiler was moved to Kentucky from Michigan in 1987. The actual date of construction of the 703 Boiler is prior to June 19, 1984.

APPLICABLE REGULATIONS:

a. For the 703 Boiler :
   i. Regulation 401 KAR 51:017 (40 CFR 52.21) applies to the particulate, sulfur dioxide, nitrogen oxide and visible emissions.
   ii. Regulation 401 KAR 59:015 applies to the particulate, sulfur dioxide and visible emissions but all standards under this regulation are superseded by the more stringent standards under 51:017.

b. For the 766 Boiler:
   i. Regulation 401 KAR 51:017 (40 CFR 52.21) applies to the particulate, sulfur dioxide, nitrogen oxide and visible emissions.
   ii. Regulation 401 KAR 60:043 (40 CFR 60 Subpart Dc) applies to the particulate and sulfur dioxide emissions.
   iii. Regulation 401 KAR 59:015 applies to the particulate, sulfur dioxide and visible emissions but all standards under this regulation are superseded by the more stringent standards under 51:017.

SECTION B - EMISSION POINTS, AFFECTED FACILITIES, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS

(1) UTILITIES - BOILERS: (Continued)

APPLICABLE REGULATIONS:

c. For the 767 Boiler:
   i. Regulation 401 KAR 60:042 (40 CFR 60 Subpart Db) applies to the sulfur dioxide, nitrogen oxides, and visible emissions.
   ii. Regulation 401 KAR 59:015 applies to the particulate, sulfur dioxide and visible emissions.

d. For the 600, 601 and 657 Boilers:
   Regulation 401 KAR 61:015 applies to the particulate, sulfur dioxide and visible emissions.

1. Operating Limitations:

a. For the 703 Boiler:
   i. The maximum rated heat input while firing natural gas shall not exceed 175.2 mmBTU/hr (Permit C-87-059: PSD limit).
   ii. The maximum rated heat input while firing fuel oil #6 shall not exceed 167.1 mmBTU/hr (Permit C-87-059: PSD limit).

b. For the 766 Boiler: The maximum rated heat input shall not exceed 97.0 mmBTU/hr (Permit C-90-157: PSD Limit).

c. For the 767 Boiler: The fuel oil #2 usage rate shall not exceed 550 hours per year [12-month rolling period] (Permit V-99-050: Limit taken to qualify for alternate opacity monitoring procedures and waiver of COM requirements).

Compliance Demonstration Methods:

a. For the 703 Boiler:
   i. The permittee shall keep monthly records of the amounts of each type of fuel combusted and the hours of operation of the 703 Boiler.
   ii. The heat input calculated by the formula below shall be compared with the heat input limit to determine compliance for the 703 Boiler:

   Heat Input = [Monthly fuel usage rate] x [Fuel Heating Value] / [Monthly Hours of Operation]

b. For the 766 Boiler:
   i. The permittee shall keep continuous (1-hour average) records of the fuel usage rate at the 766 Boiler.
   ii. For natural gas, the permittee shall obtain records from the fuel supplier(s) certifying the maximum heat content of the gas once a month. For fuel oil #2, the permittee shall obtain the maximum heat content of the fuel oil for each shipment.
   iii. The heat input calculated by the formula below shall be compared with the heat input limit to determine compliance for the 766 Boiler:

   Heat Input = [Hourly fuel usage rate] x [Maximum Fuel Heating Value]

c. For the 767 Boiler:
   i. The permittee shall keep monthly records of the total number of hours of fuel oil #2 usage at the 767 Boiler.
   ii. The permittee shall maintain records of the 12-month rolling total of the hours of fuel oil #2 usage at the 767 Boiler.

SECTION B - EMISSION POINTS, AFFECTED FACILITIES, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS

(1) UTILITIES - BOILERS: (Continued)

2. Emission Limitations:

(a) For the 703 Boiler, pursuant to Regulation 401 KAR 51:017, Section 9 (3):

i. For natural gas combustion:

a. Emissions of particulate matter shall not exceed 0.1 lb/mmBTU.
b. Emissions of sulfur dioxide shall not exceed 0.8 lb/mmBTU.
c. Emissions of nitrogen oxides shall not exceed 0.2 lb/mmBTU.
d. The opacity of visible emissions shall not exceed 20%.

ii. For fuel oil #2 and #6 combustion:

a. Emissions of particulate matter shall not exceed 0.1 lb/mmBTU.
b. Emissions of sulfur dioxide shall not exceed 0.8 lb/mmBTU.
c. The sulfur content of the fuel oils shall not exceed 0.75 percent by weight.
d. Emissions of nitrogen oxides shall not exceed 0.4 lb/mmBTU.
e. The opacity of visible emissions shall not exceed 20%.

(b) For the 766 Boiler, pursuant to Regulation 401 KAR 51:017, Section 9 (3):

i. For natural gas combustion:

a. Emissions of particulate matter shall not exceed 0.015 lb/mmBTU.
b. Emissions of sulfur dioxide shall not exceed 0.5 lb/mmBTU.
c. Emissions of nitrogen oxides shall not exceed 0.1 lb/mmBTU.
d. The opacity of visible emission shall not exceed 20%.

ii. For fuel oil #2 combustion:

a. Emissions of particulate matter shall not exceed 0.015 lb/mmBTU.
b. b. Emissions of sulfur dioxide shall not exceed 0.5 lb/mmBTU; or
c. Pursuant to Regulation 40 CFR 60.42c (d), the sulfur content of the oil shall not exceed 0.5 percent by weight.
d. Emissions of nitrogen oxides shall not exceed 0.2 lb/mmBTU.
e. The opacity of visible emissions shall not exceed 20%.

(c) For the 600 Boiler, pursuant to Regulation 401 KAR 61:015, Sections 4 and 5, for natural gas or fuel oil #6 combustion:

i. Emissions of particulate matter shall not exceed 0.35 lb/mmBTU.
ii. Emissions of sulfur dioxide shall not exceed 4.63 lb/mmBTU.
iii. The opacity of visible emissions shall not exceed 20%.

(d) For the 601 Boiler, pursuant to Regulation 401 KAR 61:015, Sections 4 and 5, for natural gas or fuel oil #6 combustion:

i. Emissions of particulate matter shall not exceed 0.30 lb/mmBTU.
ii. Emissions of sulfur dioxide shall not exceed 4.32 lb/mmBTU.
iii. The opacity of visible emissions shall not exceed 20%.

SECTION B - EMISSION POINTS, AFFECTED FACILITIES, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS

(1) UTILITIES - BOILERS: (Continued)

2. Emission Limitations: (Continued)

(e) For the 657 Boiler, pursuant to Regulation 401 KAR 61:015, Sections 4 and 5, for natural gas or fuel oil #6 combustion:

i. Emissions of particulate matter shall not exceed 0.27 lb/mmBTU.

ii. Emissions of sulfur dioxide shall not exceed 4.09 lb/mmBTU.

iii. The opacity of visible emissions shall not exceed 20%.

(f) For the 767 Boiler,

i. For natural gas combustion:

a. Emissions of nitrogen oxides shall not exceed 0.20 lb/mmBTU (30-day rolling average) [Regulation 401 KAR 60:042 [(40 CFR 60.44b (a)]].

b. Emission of particulate matter shall not exceed 0.1 lb/mmBTU [401 KAR 59:015, Section 4 (1)(b)].

c. Emissions of sulfur dioxide shall not exceed 0.8 lb/mmBTU [401 KAR 59:015, Section 5 (1)(b)].

d. The opacity of visible emission shall not exceed 20% [401 KAR 59:015, Section 4 (2)].

ii. For fuel oil #2 combustion:

a. Emissions of nitrogen oxides shall not exceed 0.20 lb/mmBTU (30-day rolling average) [Regulation 401 KAR 60:042 [(40 CFR 60.44b (a)]].

b. Emissions of particulate matter shall not exceed 0.10 lb/mmBTU [401 KAR 59:015, Section 4 (1)(b)].

c. Emissions of sulfur dioxide shall not exceed 0.8 lb/mmBTU [40 CFR 60.42b (a)] and the sulfur content of the fuel oil shall not exceed 0.5 percent by weight [40 CFR 60.42b (j)].

d. The opacity of visible emissions shall not exceed 20% (6-minute average) except for one 6-minute period per hour of not more than 27% [40 CFR 60.43b (f)].

iii. For natural gas and fuel oil #2 combined:
Emissions of nitrogen dioxides shall not exceed 39.5 tons per year (12-month rolling total).

Compliance Demonstration Methods:

a. For sulfur content limits:
The permittee shall demonstrate compliance with the sulfur content limits through either:

i. Fuel oil sampling - the oil in each fuel oil tank shall be sampled after each new shipment of oil is received as described in 40 CFR 60.46c (d)(2); or

ii. Fuel oil supplier certification - the permittee shall maintain fuel oil receipts as specified in 40 CFR 60.49b (r).

SECTION B - EMISSION POINTS, AFFECTED FACILITIES, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS

(1) UTILITIES - BOILERS: (Continued)

Compliance Demonstration Methods: (Continued)

b. For the nitrogen oxides, particulate matter and sulfur dioxide emission standards:

i. Compliance with all emission standards (except the nitrogen oxide limits on the 767 boiler) shall be demonstrated through the following:

(a) For each boiler, burning only the fuels specified in this permit shall be deemed to be compliance with the applicable emission standards. The permittee shall keep annual (calendar year) records of the type(s) of fuel burned at each boiler.

(b) Performance testing using Reference Methods specified in Regulation 401 KAR 50:015. Performance testing shall be conducted on all boilers in the 12-month period immediately preceding the date of expiration of this permit. For the 600, 601 and 657 boilers, this testing requirement shall apply to each unit only if the unit operates at an annual capacity factor equal to or greater than 30% during any consecutive 12-month period.

ii. For compliance with the nitrogen oxides standards and annual emission limits for the 767 boiler (U.11), see **Section 4. Specific Monitoring Requirements.**

c. For visible emissions:

i. For each boiler, no compliance demonstration is necessary while natural gas and fuel oil #2 are the fuels burned.

ii. For each boiler permitted to burn fuel oil #6, the permittee shall perform the monitoring and recordkeeping requirements listed under **4. Specific Monitoring Requirements** and **5. Specific Recordkeeping Requirements** during all periods except as provided by 401 KAR 50:055 Section 1(1), and except for the following:

(a) Pursuant to Regulations 401 KAR 59:010 and 61:015, Section 4(2)(b), a maximum of 40% opacity is permissible for not more than 6 consecutive minutes in any 60 consecutive minute period during cleaning the fire box or blowing soot.

(b) Pursuant to Regulations 401 KAR 59:010 and 61:015, Section 4(2)(c), the opacity standard does not apply during building a new fire for the period required to bring the boiler up to operating conditions, provided the method used is that recommended by the manufacturer and the time does not exceed the manufacturer's recommendations.

(c) Pursuant to Regulation 401 KAR 50:055, Section 2(4), the opacity standard does not apply during periods of startup and shutdown.

iii. For each boiler, the permittee shall maintain records of the occurrence and duration of each incident of fire box cleaning, soot blowing, fire building, startup, and shutdown.

3. Specific Testing Requirements:

a. For all boilers (except 767): Pursuant to Regulations 401 KAR 59:005, Section 2(2) and 401 KAR 50:045, Section 1, performance testing using the Reference Methods specified in Regulation 401 KAR 50:015 shall be conducted in the 12-month period immediately preceding the date of expiration of this permit. For the 600, 601 and 657 boilers, this testing requirement shall apply to each unit only if the unit operates at an annual capacity factor equal to or greater than 30% during any consecutive 12-month period.

REGULATIONS, AND OPERATING CONDITIONS

(1) UTILITIES - BOILERS: (Continued)

3. Specific Testing Requirements: (Continued)

b. For the 767 Boiler, the permittee shall conduct performance testing for particulate matter and visible emissions from fuel oil #2 combustion using Reference Methods 5 and 9 respectively within 60 days after achieving the maximum firing rate for fuel oil #2.

c. For the 767 Boiler, the permittee shall demonstrate compliance with the sulfur dioxide emission limits for fuel oil #2 combustion through fuel supplier certification of the fuel sulfur content.

d. If fuel oil sampling is performed, the sampling shall be performed in accordance with the procedures described in 40 CFR 60.46c (d)(2).

4. Specific Monitoring Requirements:

a. The permittee shall monitor and maintain records of the following information:

i. The monthly (calendar month) fuel usage rate (cubic feet/month or gallons per month) of each of the fuels (natural gas, fuel oils #2 and #6) listed previously for each boilers.

ii. The monthly hours of operation of the 703 Boiler.

iii. The sulfur content of each type of fuel oil burned.

b. For boilers permitted to burn fuel oil #6 - once per calendar day, during periods when fuel oil #6 is used, the permittee shall survey each boiler stack and maintain a daily log noting the following information:

i. Whether any air emissions were visible from any individual stack;

ii. All emission points from which visible emissions were observed;

iii. Whether the visible emissions were normal for the boiler.

If no abnormal visible emissions are observed, then no further observations or records are required. If abnormal visible emissions are observed, the permittee shall perform one of the following:

iv. The permittee shall perform a Method 9 reading for the emission points of concern. The opacity observed shall be recorded in the daily log. The reading shall be performed by a representative of the permittee certified in Visible Emissions Evaluations. The permittee shall maintain a list of all individuals that are certified Visible Emissions Evaluators and the date of certification; or

v. The permittee shall observe and record in the daily log the following additional information:

(1) The color of the emissions;

(2) Whether the emissions were light or heavy;

(3) The total duration of the visible emission incident;

(4) The cause of the abnormal emissions; and

(5) Any corrective actions taken.

SECTION B - EMISSION POINTS, AFFECTED FACILITIES, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS

(1) UTILITIES - BOILERS: (Continued)

4. Specific Monitoring Requirements: (Continued)

d. For the 767 Boiler, the permittee shall:
   i. Install, calibrate, maintain, and operate a continuous monitoring system for measuring nitrogen oxides emissions in accordance with the procedures described in 40 CFR 60.48b (b), (c), (d), (e), and (f); or
   ii. [40 CFR 60.48b (g)(2)] - Monitor boiler operating conditions and predict nitrogen oxides emissions as specified in a plan submitted pursuant to 40 CFR 60.49b (c).

e. The 767 boiler is subject to 40 CFR 60 Subpart Db and is permitted to burn fuel oil #2 for upto 550 hours per year. 40 CFR 60.48b (b) requires installation of a continuous opacity monitoring system (COM) on this boiler. However, the permittee has been approved to use the alternative opacity monitoring procedures specified below. The specified procedures are valid only during operation of the boiler on fuel oil #2 and may not be used if any other liquid or solid fuels are burned in the boiler.
   For the 767 Boiler, whenever fuel oil #2 is used, the permittee shall perform the following monitoring:
   i. At least once every four hours during daylight shifts when oil is combusted, an observer certified in accordance with Method 9 shall perform 6-minute visible emission observations.
   ii. If the average opacity for a 6-minute set of readings, made in accordance with Condition i. above, exceeds 10 percent, the observer shall collect two additional 6-minute sets of visible emission readings for a total of three data sets.
   iii. Records of the date and time of visible emission observations, along with the results of each observation, must be maintained.

5. Specific Recordkeeping Requirements:

The permittee shall maintain records of the following information:

a. The maximum design heat input capacity of each of the boilers.
b. The monthly fuel usage rate of each fuel at each boiler.
c. The total amount of every fuel used at each boiler for every consecutive 12-month period.
d. The monthly hours of operation of the 703 Boiler.
e. For the 766 Boiler, the permittee shall keep continuous (1-hour average) records of the fuel usage rate.
f. The sulfur content of each type of fuel oil used. If fuel oil supplier certification is used to demonstrate compliance with the sulfur content limits, the records shall contain the following information:
   i. The name of the oil supplier;
   ii. A statement from the oil supplier certifying the sulfur content of the oil.
g. A daily log of the visible emissions readings (see Item 4.b. above) during periods of fuel oil #6 combustion.
h. Results of the latest performance tests conducted at each boiler.

SECTION B - EMISSION POINTS, AFFECTED FACILITIES, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS

(1) UTILITIES - BOILERS: (Continued)

5. Specific Recordkeeping Requirements: (Continued)

i. For the 767 Boiler, the permittee shall maintain the records required by:
   i. 40 CFR 60.49b (d); and
   ii. 40 CFR 60.49B (g) for each steam generating unit operating day.

j. For the 767 Boiler, during periods of fuel oil #2 operation, the permittee shall maintain the following records:
   i. Date and time of the required visible emission observations, along with the results of each observation.
   ii. The permittee shall record the hours of operation for which fuel oil #2 was burned each calendar quarter and include this information in the required excess emission reports.

6. Specific Reporting Requirements:

a. For the 767 Boiler, the permittee shall submit to the Division the following information:

40 CFR 60.49b (h)	Excess emission reports
40 CFR 60.49b (i)	Quarterly reports of the information recorded under 40 CFR 60.49b (g)

b. For the 767 Boiler, thirty days after the end of each calendar quarter in which there are opacity excess emissions during fuel oil #2 combustion, the permittee shall submit an excess emission report (EER) to the Division. If there are no opacity excess emissions during a calendar quarter, EERs maybe submitted on a semiannual basis. For reporting purposes, excess emissions are defined as any 6-minute period during which the average opacity exceeds 20 percent, and EERs must indicate the total time of the visible emission observations during a calendar quarter and identify the duration of any excess emissions. The report shall include a record of the hours of operation for which fuel oil #2 was burned during the previous calendar quarter(s).

c. VOC emissions from the boilers shall be reported as described in **Section B (23) Group Requirement 1 - Previous Synthetic Minors (VOC)**.

7. Specific Control Equipment Operating Conditions: None

8. Alternate Operating Scenarios: None

9. Compliance Schedule:

For the 767 boiler:

Within 60 days after achieving the maximum firing rate for fuel oil #2, the permittee shall conduct performance testing for particulate matter and visible emissions as required by Regulation 401 KAR 59:015, Section 8 (1).

SECTION B - EMISSION POINTS, AFFECTED FACILITIES, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS

(2) UTILITIES - FURNACES:

EIS No.	Dow Vent ID	Furnace ID	Make/Model	Date of Construction	Maximum Rated Capacity (Fuels used)
A1	A1.01	1114	Struthers-Wells, Corp. Model 9CV 27-6 Dowtherm A Vaporizer	1965	19.7 mmBTU/hr (Natural Gas fired only)
AA	A2.01	3600	Struthers-Wells, Corp. Model 9CV 27-6 Dowtherm A Vaporizer	1986	19.7 mmBTU/hr (Natural Gas fired only)
AL	A10.01	5250	Struthers-Wells, Corp. Syltherm Vaporizer	08/01/90	25.9 mmBTU/hr (Natural Gas fired only)

APPLICABLE REGULATIONS:

a. For the 5250 and 3600 furnaces:
Regulation 401 KAR 59:015 applies to the particulate, sulfur dioxide and visible emissions.

b. For the 1114 furnace:
Regulation 401 KAR 61:015 applies to the particulate, sulfur dioxide and visible emissions.

1. Operating Limitations: None

2. Emission Limitations:

a. For the 1114 furnace, pursuant to Regulation 401 KAR 61:015, Sections 4 & 5:
   i. Emissions of particulate matter shall not exceed 0.48 lb/mmBTU.
   ii. Emissions of sulfur dioxide shall not exceed 5.51 lb/mmBTU.
   iii. The opacity of visible emissions shall not exceed 20 percent.

b. For the 3600 furnace, pursuant to Regulation 401 KAR 59:015, Sections 4 &5:
   i. Emissions of particulate matter shall not exceed 0.48 lb/mmBTU.
   ii. Emissions of sulfur dioxide shall not exceed 2.27 lb/mmBTU.
   iii. The opacity of visible emissions shall not exceed 20 percent.

c. For the 5250 furnace, pursuant to Regulation 401 KAR 59:015, Sections 4 &5:
   i. Emissions of particulate matter shall not exceed 0.27 lb/mmBTU.
   ii. Emissions of sulfur dioxide shall not exceed 0.84 lb/mmBTU.
   iii. The opacity of visible emissions shall not exceed 20 percent.

For each furnace, the permittee shall comply with the opacity limits above during all periods except as provided by 401 KAR 50:055, Section 1(1), and except for the following:

a. Pursuant to Regulations 401 KAR 59:015 and 61:015, Section 4(2)(b), a maximum of 40% opacity is permissible for not more than 6 consecutive minutes in any 60 consecutive minute period during cleaning the fire box or blowing soot.

REGULATIONS, AND OPERATING CONDITIONS

(2) UTILITIES - FURNACES: (Continued)

b. Pursuant to Regulations 401 KAR 59:015 and 61:015, Section 4(2)(c), the opacity standard does not apply during building a new fire for the period required to bring the furnace up to operating conditions, provided the method used is that recommended by the manufacturer and the time does not exceed the manufacturer's recommendations.
c. Pursuant to Regulation 401 KAR 50:055, Section 2(4), the opacity standard does not apply during periods of startup and shutdown.

Compliance Demonstration Methods:

a. Mass Emission Standards: Compliance with the emission standards for particulate matter and sulfur dioxide shall be demonstrated through the following:
   i. The permittee shall keep annual (calender year) records of the type of fuel burned at each furnace. For each furnace, burning only the fuels specified in this permit shall be deemed to be compliance with the applicable emission standards; and
   ii. Performance testing using Reference Methods specified in Regulation 401 KAR 50:015 shall be conducted as required by the Division.
b. For visible emissions: For each furnace, burning only the fuel specified in this permit (natural gas) shall be deemed to be compliance with the applicable opacity standards.

3. Testing Requirements:

For the furnaces listed above: Pursuant to Regulations 401 KAR 59:005, Section 2(2) and 401 KAR 50:045, Section 1, performance testing using the Reference Methods specified in Regulation 401 KAR 50:015 shall be conducted as required by the Division.

4. Specific Monitoring Requirements:

a. The permittee shall monitor and maintain records of the following information:
   The monthly (calendar month) fuel usage rate (cubic feet/month) of natural gas for each of the furnaces.
b. During period of firebox cleaning and soot blowing, the permittee shall survey each boiler stack and maintain a daily log noting the following information:
   i. Whether any air emissions were visible.
   ii. All emission points from which visible emissions were observed;
   iii. Whether the visible emissions were normal for the boiler.

5. Specific Recordkeeping Requirements:

The permittee shall maintain the following records:

a. For each furnace, the permittee shall maintain records of the occurrence and duration of each incident of fire box cleaning, soot blowing, fire building, startup and shutdown.
b. The monthly fuel usage rate of natural gas at each furnace.

SECTION B - EMISSION POINTS, AFFECTED FACILITIES, APPLICABLE

REGULATIONS, AND OPERATING CONDITIONS

(2) UTILITIES - FURNACES: (Continued)

6. Specific Reporting Requirements:
VOC emissions from the furnaces shall be reported as described in **Section B (23) Group Requirement 1 - Previous Synthetic Minors (VOC)**.

7. Specific Control Equipment Operating Conditions: None

8. Alternate Operating Scenarios: None

SECTION B - EMISSION POINTS, AFFECTED FACILITIES, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS

(3) STORAGE TANKS - CATEGORY 1:

Dow Vent ID	Tank ID	Capacity (gallons)	Type	Dow Vent ID	Tank ID	Capacity (gallons)	Type
A-10 ABS	1505*	20,000	Horizontal Pressure Vessel	C2.10	1543	20,000	Horizontal Pressure Vessel
A-10 ABS	1506*	20,000	Horizontal Pressure Vessel	A-10 ABS	5146	16,500	Horizontal Pressure Vessel
A-10 ABS	1507*	20,000	Horizontal Pressure Vessel	U.06	785*	100,000	Horizontal Pressure Vessel
C2.09	1542*	20,000	Horizontal Pressure Vessel				

* See also Storage Tanks - Category 4 for Early Reduction Requirements.

APPLICABLE REGULATIONS:
Regulation 401 KAR 59:485 (40 CFR 60 Subpart Kb) applies to each of the tanks listed above.

1. Operating Limitations: None

2. Emission Limitations: None

3. Testing Requirements: None

4. Specific Monitoring Requirements: None

5. Specific Recordkeeping Requirements:
Pursuant to 40 CFR 60.116b (b), for each of the tanks listed above, the permittee shall keep readily accessible records showing the dimensions of the tank and an analysis showing the capacity of the tank. The records shall be kept for the life of the tank.

6. Specific Reporting Requirements:
VOC emissions shall be reported as described in **Section B (23) Group Requirement 1 - Previous Synthetic Minors (VOC)**.

7. Specific Control Equipment Operating Conditions: None

8. Alternate Operating Scenarios: None

SECTION B - EMISSION POINTS, AFFECTED FACILITIES, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS

(3) STORAGE TANKS - CATEGORY 2:

NOTE: Emissions from these sources are included in KYEIS ID# 82 T-10 Thermal Oxidizer.

Dow Vent ID	Tank ID	Capacity	Type	Dow Vent ID	Tank ID	Capacity	Type
A-10 ABS	5900	30000	Horizontal Pressure Vessel	A-10 ABS	5908	100000	Sphere
A-10 ABS	5901	30000	Horizontal Pressure Vessel	A-10 ABS	5909	100000	Sphere
A-10 ABS	5902	30000	Horizontal Pressure Vessel	A-10 ABS	5910	60000	Sphere
A-10 ABS	5903	30000	Horizontal Pressure Vessel	D-10 MEVA	5911	160000	Sphere
A-10 ABS	5904	30000	Horizontal Pressure Vessel	D-10 MEVA	5912	160000	Sphere
A-10 ABS	5905	30000	Horizontal Pressure Vessel	A-10 ABS	5956	30000	Horizontal Pressure Vessel
A-10 ABS	5906	200000	Sphere	A-10 ABS	5957	30000	Horizontal Pressure Vessel
A-10 ABS	5907	100000	Sphere	A-10 ABS	5958	30000	Horizontal Pressure Vessel
883 Quench	954	20,000	Vertical				

* See Storage Tanks - Category 4 for Early Reduction Requirements.

APPLICABLE REGULATIONS:

401 KAR 60:005, incorporating by reference 40 CFR 60 Subpart Kb, "Standards of Performance for Volatile Organic Liquid Storage Vessels (including Petroleum Liquid Storage Vessels) for which Construction, Reconstruction, or Modification Commenced after July 23, 1984", applies to each of the tanks listed above.

1. Operating Limitations:

Each of the storage tanks listed above shall be equipped with a closed vent system and control device meeting the requirements of 40 CFR 60.112b(a)(3).

Compliance Demonstration Method:

Each tank shall be in compliance when it is vented to the Vent Header System and control devices as complying with 40 CFR 60.112b (a)(3)(i) and (ii). See the 40 CFR 60 Subpart Kb operating requirements for the Vent Header System and control devices in **Section B (6) Vent Header System.**

2. Emission Limitations:

See the 40 CFR 60 Subpart Kb emissions limitations requirements for the Vent Header System

and control devices in **Section B (6) Vent Header System.**

SECTION B - EMISSION POINTS, AFFECTED FACILITIES, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS

(3) STORAGE TANKS - CATEGORY 2: (Continued)

3. Testing Requirements:

a. Each tank vented to the Vent Header System is exempt from 40 CFR 60.8 of the General Provisions. [40 CFR 60.113b (c)]

b. See the 40 CFR 60 Subpart NNN testing requirements for the Vent Header System and control devices in **Section B (6) Vent Header System.**

4. Specific Monitoring Requirements:

See the 40 CFR 60 Subpart NNN monitoring requirements for the Vent Header System and control devices in **Section B (6) Vent Header System.**

5. Specific Recordkeeping Requirements:

a. The permittee shall keep the following information in readily accessible records for the life of the source: [40 CFR 60.115b (a), Reporting and recordkeeping requirements, 40 CFR 60.116b (a), Monitoring of operations]

i. The dimension of each tank and an analysis showing the capacity of each tank. . [40 CFR 60.116b (b)]

ii. A copy of the Subpart Kb Operating Plan. [40 CFR 60.115b (c)(1)]

b. See the 40 CFR 60 Subpart NNN recordkeeping requirements for the Vent Header System and control devices in **Section B (6) Vent Header System.**

6. Specific Reporting Requirements:

a. The permittee shall submit an Operating Plan containing the information listed in **Section B (6) Vent Header System** reporting requirements as an attachment to the notification required by 40 CFR 60.7(a)(1) for approval by the division. [40 CFR 60.113b(c)(1)] The "Subpart Kb Operating Plan" is the submitted plan unless the plan was modified by the division during the review process. In this case, the modified plan applies. A new or revised Subpart Kb Operating Plan shall be submitted for any construction, reconstruction or modification of an affected facility or any component of the Vent Header System and control devices that may affect compliance.

b. VOC emissions shall be reported as described in **Section B (23) Group Requirement 1 - Previous Synthetic Minors (VOC)**.

7. Specific Control Equipment Operating Conditions:

See the 40 CFR 60 Subpart Kb requirements for the Vent Header System and control devices in **Section B (6) Vent Header System**.

8. Alternate Operating Scenarios: None

SECTION B - EMISSION POINTS, AFFECTED FACILITIES, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS

(3) STORAGE TANKS - CATEGORY 3:

(D10.03)*	5915 Methanol Tank	External Floating Roof
	Primary Seal:	Mechanical Shoe Seal
	Capacity:	1,000,000 gallons

* See Storage Tanks - Category 4 for Early Reduction Requirements.

APPLICABLE REGULATIONS:
Regulation 401 KAR 59:485 (40 CFR 60 Subpart Kb) applies to the 5915 Methanol Tank.

1. Operating Limitations:
The 5915 Tank shall be equipped with an external floating roof [40 CFR 60.112b (a)(2)] meeting the following specifications:

40 CFR 60.112b(a)(2)(i)	Primary/secondary seals
40 CFR 60.112b(a)(2)(ii)	Roof/rim openings
40 CFR 60.112b(a)(2)(iii)	Operating/filling/emptying requirements

2. Emission Limitations: None

3. Testing Requirements:
The permittee shall perform the following testing procedures described in 40 CFR 60.113b(b):

40 CFR 60.113b(b)(1)	Measurement of gap areas and maximum gap widths
40 CFR 60.113b(b)(2)	Gap surface area of each gap location
40 CFR 60.113b(b)(3)	Total gap area determination
40 CFR 60.113b(b)(4)	Repair procedures
40 CFR 60.113b(b)(5)	Gap measurement notification
40 CFR 60.113b(b)(6)	Visual inspections

The testing shall be performed in accordance with the frequencies specified in each subsection.

4. Specific Monitoring Requirements: See Above in **3. Testing requirements**

5. Specific Recordkeeping Requirements:

a. The permittee shall keep readily accessible records showing the dimensions of the tank and an analysis showing the capacity of the tank. The records shall be kept for the life of the tank [40 CFR 60.116b(b)].
b. The permittee shall maintain a record of each liquid stored, the period of storage, and the maximum true vapor pressure of the liquid stored during the respective storage period [40 CFR 60.116b (c)].
c. The permittee shall keep a record of each gap measurement performed as required by 40 CFR 60.113b(b). Each record shall contain [40 CFR 60.115b(b)(4)]:
   i. The date of measurement;
   ii. The raw data obtained in the measurement;
   iii. The calculations described in 40 CFR 60.113b (b)(2) and (b)(3).

SECTION B - EMISSION POINTS, AFFECTED FACILITIES, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS

(3) STORAGE TANKS - CATEGORY 3: (Continued)

6. Specific Reporting Requirements:

a. After each seal gap measurement that detects gaps exceeding the limitations specified in 40 CFR 60.113b(b)(4), the permittee shall submit to the Division a report of the information required by 40 CFR 60.115b(b)(4) - Seal gap measurement notification.

b. VOC emissions shall be reported as described in **Section B (23) Group Requirement 1 - Previous Synthetic Minors (VOC)**.

7. Specific Control Equipment Operating Conditions: None

8. Alternate Operating Scenarios: None

SECTION B - EMISSION POINTS, AFFECTED FACILITIES, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS

(3) STORAGE TANKS - CATEGORY 4:

a. The following tanks are subject to 40 CFR 60 Subpart Kb (incorporated by reference in 401 KAR 60:005) and are also sources of hazardous air pollutants. Therefore, they are subject to 40 CFR 63 Subpart D (incorporated by reference in 401 KAR 63:002) and form part of the permittee's Early Reduction Source. This category only addresses early reductions requirements (see previous Categories for Kb requirements).

Dow Vent ID	Tank ID	Dow Vent ID	Tank ID	Dow Vent ID	Tank ID	Dow Vent ID	Tank ID
A-10 ABS	1505	A-10 ABS	1506	A-10 ABS	1507	A-10 ABS	5146
A-10 ABS	5900	A-10 ABS	5901	A-10 ABS	5902	A-10 ABS	5903
A-10 ABS	5904	A-10 ABS	5905	A-10 ABS	5906	A-10 ABS	5907
A-10 ABS	5908	A-10 ABS	5909	A-10 ABS	5910	A-10 ABS	5956
A-10 ABS	5957	A-10 ABS	5958	C2.09	1542	C2.10	1543
D-10 MEVA	5911	D-10 MEVA	5912	D10.03	5915	U.06	785
883 Quench	954						

b. The following tanks are not subject to 40 CFR 60 Subpart Kb (incorporated by reference in 401 KAR 60:005) and would be insignificant activities except that they are sources of hazardous air pollutants. Therefore, they are subject to 40 CFR 63 Subpart D (incorporated by reference in 401 KAR 63:002) and form part of the permittee's Early Reduction Source. This category only addresses early reductions requirements.

Dow Vent ID	Tank ID	Dow Vent ID	Tank ID	Dow Vent ID	Tank ID	Dow Vent ID	Tank ID
A-10 ABS	198	A-10 ABS	1133	A-10 ABS	1137	A-10 ABS	1138
A-10 ABS	3520	A-10 ABS	1169	A-10 ABS	1500	A-10 ABS	1501
A-10 ABS	1502	A-10 ABS	1504	A-10 ABS	1510	A-10 ABS	1511
A-10 ABS	1512	A-10 ABS	1513	A-10 ABS	1515	A-10 ABS	1518
A-10 ABS	1530	A-10 ABS	1531	A-10 ABS	1570	A-10 ABS	1571
A-10 ABS	1572	A-10 ABS	3534	D-1 MEVA	1532	D-1 MEVA	1533
D1.03	1520	D1.04	1536	D1.05	1483	F15.06	2458
GAS.01	009	GAS.02	010	U.07	3100	U.08	790
U.10	710	W.03	923				

SECTION B - EMISSION POINTS, AFFECTED FACILITIES, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS

(3) STORAGE TANKS - CATEGORY 4: (Continued)

APPLICABLE REGULATIONS:
401 KAR 63:002, incorporating by reference 40 CFR 63 Subpart D, Regulations Governing Compliance Extensions for Early Reductions of Hazardous Air Pollutants", applies to the emissions of hazardous air pollutants (HAPs) from each of the tanks listed above.

1. Operating Limitations: None

2. Emission Limitations: Emissions of hazardous air pollutants (HAPs) shall comply with the Early Reduction Limits in **Section B (26) Group Requirement 4 - Early Reductions Requirements.**

Compliance Demonstration Method:
Emissions of all hazardous air pollutants shall be calculated using the current AP-42 emission methodology for storage tanks or Early Reduction calculations.

3. Testing Requirements: None

4. Specific Monitoring Requirements: See **5. Specific Recordkeeping Requirements**.

5. Specific Recordkeeping Requirements:

a. For each of the tanks listed above, the permittee shall keep records of the following information:
   i. Emissions calculations for all hazardous air pollutants;
   ii. The methods used to determine HAP and weighted HAP emissions.

b. The permittee shall maintain readily accessible records of all parameters needed to calculate emissions from each of the tanks listed above using the latest AP-42 emission calculation methodology for storage tanks or Early Reduction calculations.

c. For tanks which are vented to a common control or recovery device, the permittee may elect to calculate total emissions from the common control or recovery device instead of each individual tank. In those instances, individual tank calculations are not required and the permittee shall maintain records of the calculations and the methods used to determine HAP and weighted HAP emissions.

6. Specific Reporting Requirements:

a. All emissions of hazardous air pollutants shall be included in the permittee's Early Reduction reports as described in **Section B (26) Group Requirement 4 - Early Reductions Requirements**.

b. VOC emissions shall be reported as described in **Section B (23) Group Requirement 1 - Previous Synthetic Minors (VOC)**.

SECTION B - EMISSION POINTS, AFFECTED FACILITIES, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS

(3) STORAGE TANKS - CATEGORY 4: (Continued)

7. Specific Control Equipment Operating Conditions:

a. For the 5915 Methanol Tank, the permittee shall follow the procedures described under **Storage Tanks - Category 3**.

b. For all other storage tanks for which emission estimates are based on a functioning secondary seal system, the permittee shall maintain and inspect the secondary seal system such that:

i. The accumulated area of gaps between the tank wall and the secondary seal shall not exceed 21.2 cm^2 per meter of tank diameter, and the width of any portion of any gap shall not exceed 1.27 cm.

ii. There are to be no holes, tears, or other openings in the seal or seal fabric.

8. Alternate Operating Scenarios: None

SECTION B - EMISSION POINTS, AFFECTED FACILITIES, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS

(4) REACTORS:

EIS No.	Dow Vent ID	Reactor ID	Process Unit
-	P10.01/T10.01	1103	A1
-	P10.01/T10.01	1141	A1
-	P10.01/T10.01	1183	A1
-	D1.01	1410	D1
-	D1.01	1420	D1
-	D1.01	3400	D1
-	P10.01/T10.01	3500	A2
-	P10.01/T10.01	5100	A10
-	P10.01/T10.01	5200	A10
-	T10.01	5280	R10
-	T10.01	5660	D10
	T10.01	5670	D10
-	T10.01	5770	D10

APPLICABLE REGULATIONS:

a. Regulation 401 KAR 60:005, incorporating by reference 40 CFR 60 Subpart RRR, Standards of Performance for Volatile Organic Compound Emissions From Synthetic Organic Chemical Manufacturing Industry (SOCMI) Reactor Processes, applies to each of the reactors listed above.

b. Exemption - The reactors listed below are exempt from 40 CFR 60 Subpart RRR since they are part of a process unit that does not produce any of the chemicals listed in 40 CFR 60.707:
1301, 1310, 1348, 3201, 5501, 5509, 5517, 5519.

1. Operating Limitations:

The vent stream from each of the reactors listed above shall be routed to a distillation column subject to 40 CFR 60 Subpart NNN. There shall be no other releases to the ambient air except from pressure relief valves. The reactors are exempt from all provisions of 40 CFR 60 Subpart RRR except for the recordkeeping requirement below. [40 CFR 60.700(c)(5)]

2. Emission Limitations: None

3. Testing Requirements: None

4. Specific Monitoring Requirements: None

REGULATIONS, AND OPERATING CONDITIONS

(4) REACTORS: (Continued)

5. Specific Recordkeeping Requirements:
Pursuant to 40 CFR 60.705(r), the permittee shall maintain a process design description for each of the reactor systems listed above for the life of the process. If there are any changes to the process, the process design description shall be updated to include the changes.

6. Specific Reporting Requirements: None

7. Specific Control Equipment Operating Conditions: None

8. Alternate Operating Scenarios: None

SECTION B - EMISSION POINTS, AFFECTED FACILITIES, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS

(5) DISTILLATION COLUMNS - CATEGORY 1:

EIS No.	Dow Vent ID	Column ID	Process Unit	EIS No.	Dow Vent ID	Column ID	Process Unit
-	P10.01/T10.01	1127	A1	-	P10.01/T10.01	5150	A10
-	P10.01/T10.01	1176	A1	-	T10.01	5300	B10
-	T10.01	1210	B1	-	T10.01	5310	B10
-	T10.01	1260	B1	-	T10.01	5320	B10
-	T10.01	2500	B2	-	T10.01	5330	B10
-	P10.01/T10.01	3526	A2	-	T10.01	5340	B10
-	P10.01/T10.01	3536	A2	-	T10.01	5350	B10
-	T10.01	3700	B1	-	T10.01	5690	D10
-	T10.01	3710	B1	-	T10.01	5700	D10
-	T10.01	3720	B1	-	T10.01	5750	D10
-	T10.01	4500	B3	-	T10.01	6400	B20
-	P10.01/T10.01	5140	A10	-	T10.01	6410	B20
-	P10.01/T10.01	5141	A10				

APPLICABLE REGULATIONS:

401 KAR 60:005, incorporating by reference 40 CFR 60 Subpart NNN, Standards of Performance for Volatile Organic Compound (VOC) Emissions From Synthetic Organic Chemical Manufacturing Industry (SOCMI) Distillation Operations, applies to each of the distillation units listed above.

1. Operating Limitations: None

2. Emission Limitations:

The permittee shall reduce emissions of TOC (less methane and ethane) by 98 weight-percent in each vent stream on and after the date on which the initial performance test is completed, but not later than 60 days after achieving the maximum production rate at which the affected facility will be operated, or 180 days after the initial start-up, whichever date comes first. [40 CFR 60.662(a)]

Compliance Demonstration Method:

Each distillation unit shall be in compliance when it is vented to the Vent Header System and control devices which achieves 98 weight-percent reduction of TOC (less methane and ethane). See the 40 CFR 60 Subpart NNN requirements for the Vent Header System and control devices in **Section B (6) Vent Header System**.

SECTION B - EMISSION POINTS, AFFECTED FACILITIES, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS

(5) DISTILLATION COLUMNS - CATEGORY 1: (Continued)

3. Testing Requirements:

a. For the purpose of demonstrating compliance, all affected facilities shall be run at full operating conditions and flow rates during any performance test. [40 CFR 60.664(a)]

b. The permittee shall perform a performance test as specified by 40 CFR 60.664 within 180 days of implementing a change to an alternative provision of 40 CFR 60.662 with which he or she will comply. [40 CFR 60.665 (a)]

c. See the 40 CFR 60 Subpart NNN testing requirements for the Vent Header System and control devices in **Section B (6) Vent Header System.**

4. Specific Monitoring Requirements:

See the 40 CFR 60 Subpart NNN monitoring requirements for the Vent Header System and control devices in **Section B (6) Vent Header System.**

5. Specific Recordkeeping Requirements:

See the 40 CFR 60 Subpart NNN recordkeeping requirements for the Vent Header System and control devices in **Section B (6) Vent Header System**.

6. Specific Reporting Requirements:

a. The permittee shall have notified the division of the specific provisions of 40 CFR 60.662 with which the permittee has elected to comply. Notification shall have been submitted with the notification of initial start-up required by 40 CFR 60.7(a)(3). If the permittee elects at a later date to use an alternative provision of 40 CFR 60.662 with which he or she will comply, then the division shall be notified by the permittee 90 days before implementing a change. [40 CFR 60.665 (a)]

b. The permittee is exempt from the quarterly reporting requirements contained in 40 CFR 60.7(c) of the General Provisions for these affected facilities. [40 CFR 60.665 (k)]

c. See the 40 CFR 60 Subpart NNN reporting requirements for the Vent Header System and control devices in **Section B (6) Vent Header System**

7 Specific Control Equipment Operating Conditions:

See the 40 CFR 60 Subpart NNN requirements for the Vent Header System and control devices in **Section B (6) Vent Header System**.

8. Alternate Operating Scenarios: None

SECTION B - EMISSION POINTS, AFFECTED FACILITIES, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS

(5) DISTILLATION COLUMNS - CATEGORY 2:

B Process Units: 5355
C Process Units: 1306, 1307, 3000, 5531, 5533, 5502
D Process Units: 1411, 1421, 1430, 3402, 3430

APPLICABLE REGULATIONS:
None. The following distillation units are exempt from 40 CFR 60 Subpart NNN:
B Process Units - 5355 [Column is exempt per 40 CFR 60.660 (c) (3)]
C Process Units - 1306, 1307, 3000, 5531, 5533, 5502 [Columns do not produce any of the chemicals listed in 40 CFR 60.667].
D Process Units - 1411, 1421, 1430, 3402, 3430 [The columns have a total resource effectiveness (TRE) index value greater than 8.0 without the use of an air pollution control device and are exempt in part per 40 CFR 60.660 (c)(4)]

1. Operating Limitations:
All distillations units associated with the D Process Area shall vent to the D-1 MEVA (Methyl Chloride Vapor Absorber) Absorption Column.

2. Emission Limitations:
The permittee shall maintain a TRE index value of greater than 8.0 without use of a VOC emission control devices on the vent stream from the D-1 MEVA Column [40 CFR 60.662 (c)].

3. Testing Requirements:
The permittee shall conduct performance testing on the distillation units listed above as required by the Division in accordance with the procedures described in 40 CFR 60.664 (d), (e), and (f).

4. Specific Monitoring Requirements: None

5. Specific Recordkeeping Requirements:
Pursuant to 40 CFR 60.665 (h), the permittee shall keep up-to-date, readily accessible records of the following information:

a. Any changes in production capacity, feedstock type, catalyst type, or any replacement, removal, or addition of recovery equipment or a distillation unit;
b. Any recalculation of the TRE index value performance pursuant to 60.664 (f);
c. The results of any performance test performed pursuant to the methods and procedures required by 60.664 (d).

SECTION B - EMISSION POINTS, AFFECTED FACILITIES, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS

(5) DISTILLATION COLUMNS - CATEGORY 2: (Continued)

6. Specific Reporting Requirements:
The permittee shall submit to the Division semiannual reports of any recalculation of the TRE index value, pursuant to 60.665 (d) for the D Process distillation units listed above.

7. Specific Control Equipment Operating Conditions: None

8. Alternate Operating Scenarios: None

SECTION B - EMISSION POINTS, AFFECTED FACILITIES, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS

(6) VENT HEADER SYSTEM:

82 (T10.01) T-10 Thermal Oxidizer System:

Description: Vent Collection System (Three knockout pots, piping)
Burner/Combustion Chamber (Single secondary burner, 6.0 mmBTU/hr, natural gas fired, 34 % excess air
Direct Quench Chamber
Scrubbing System (HCl Absorber, 2 Ionizing Wet Scrubbers)
Induced Draft Fan

Primary fuel: natural gas

Rated capacity: 30 mmBtu/hr

Date constructed: 2001 (anticipated)

BB (P10.01) P-10 Adsorption System:

6300 Preheater
6311, 6312, 6313, 6314 Adsorbers
6316 Surge Tank

Specifications:

Manufacturer: UOP

Adsorbent: Silica Gel

Number of Beds: 4

CC (B2.03) B-2 Wet Scrubber System:

Manufacturer: Hasting

Type: Wet countercurrent cascade scrubber with baffles

Scrubbing liquid: Water @ 25 gpm

APPLICABLE REGULATIONS:

401 KAR 60:005, incorporating by reference 40 CFR 60 Subpart Kb, "Standards of Performance for Volatile Organic Liquid Storage Vessels (including Petroleum Liquid Storage Vessels) for which Construction, Reconstruction, or Modification Commenced after July 23, 1984", applies to the emissions of volatile organic compounds (VOC) that are sent to the Vent Header System from storage tanks.

401 KAR 60:005, incorporating by reference 40 CFR 60 Subpart NNN, "Standards of Performance for Volatile Organic Compound (VOC) emissions from Synthetic Organic Chemical Manufacturing Industry (SOCMI) Distillation Operations", applies to the emissions of volatile organic compounds (VOC) that are sent to the Vent Header System from distillation columns.

401 KAR 60:005, incorporating by reference 40 CFR 60 Subpart RRR, "Standards of Performance for Volatile Organic Compound (VOC) emissions from Synthetic Organic Chemical Manufacturing Industry (SOCMI) Reactor Processes", applies to the emissions of volatile organic compounds (VOC) that are sent to the Vent Header System from reactors.

401 KAR 63:002, incorporating by reference 40 CFR 63 Subpart D, "Regulations Governing Compliance Extensions for Early Reductions of Hazardous Air Pollutants", applies to all emissions of

hazardous air pollutants (HAPs) that are released from the Vent Header System.

SECTION B - EMISSION POINTS, AFFECTED FACILITIES, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS

(6) VENT HEADER SYSTEM: (Continued)

1. Operating Limitations:

The T-10 Unit shall be operated at a minimum temperature not less than 50°F (28°C) of the permittee's last performance test during all 3-hour periods and residence time shall be at least 75 percent of that in the last performance test during all 3-hour periods.

2. Emission Limitations:

a. The Vent Header System shall be a closed vent system designed to collect all VOC vapors and gases discharged from 40 CFR 60 Subpart Kb tanks in **Section B (3) Storage Tanks – Category 2** and operated with no detectable emissions as indicated by an instrument reading of less than 500 ppm above background and visual inspections. [40 CFR 60.112b (a)(3)(i), Standard for volatile organic compounds (VOC)]

Compliance Demonstration Method:

Compliance shall be demonstrated by monitoring the Vent Header System for leaks using Reference Method 21. [40 CFR 60.112b(a)(3)(i) and 40 CFR 60.485(b)]

b. The T-10 Thermal Oxidizer shall be designed and operated to reduce inlet VOC emissions from 40 CFR 60 Subpart Kb tanks in **Section B (3) Storage Tanks – Category 2** by 95 percent or greater. [40 CFR 60.112b (a)(3)(ii), Standard for volatile organic compounds (VOC)]

Compliance Demonstration Method:

Compliance shall be demonstrated using one or both of the following methods:

i. By operating and monitoring the Vent Header System and T-10 Thermal Oxidizer in accordance with the Subpart Kb Operating Plan. [40 CFR 60.113b(c)(2)]

ii. By demonstrating compliance with the 98 weight-percent reduction of TOC (less methane and ethane) requirement below.

c. The permittee shall reduce emissions of TOC (less methane and ethane) by 98 weight-percent in each vent stream from 40 CFR 60 Subpart NNN distillation units in **Section B (5) Distillation Units – Category 1** on and after the date on which the initial performance test is completed, but not later than 60 days after achieving the maximum production rate at which the affected facility will be operated, or 180 days after the initial start-up, whichever date comes first [40 CFR 60.662 (c), Standards]

Compliance Demonstration Method:

Compliance shall be determined by routing each Subpart NNN distillation unit vent stream to the T-10 Thermal Oxidizer and calculating the emission reduction (R) of TOC (minus methane and ethane) using the following equation: [40 CFR 60.664(b)(4)(ii)]

$$R = \frac{E_i - E_o}{E_i} \times 100$$

SECTION B - EMISSION POINTS, AFFECTED FACILITIES, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS

(6) VENT HEADER SYSTEM: (Continued)

2. Emission Limitations: (Continued)

where:

R = Emission reduction, percent by weight.

E_i = Mass rate of TOC entering the control device, kg/hr (lb/hr).

E_o = Mass rate of TOC discharged to the atmosphere, kg/hr (lb/hr)

The mass rates of TOC (E_i, E_o) shall be computed using the following equations:

$$E_i = K_2\left(\sum_{j=1}^{n} C_{ij}M_{ij}\right)Q_i \qquad E_o = K_2\left(\sum_{j=1}^{n} C_{oj}M_{oj}\right)Q_o$$

where:

C_{ij}, C_{oj} = Concentration of sample component ``j" of the gas stream at the inlet and outlet of the control device, respectively, dry basis, ppm by volume, as determined by Reference Method 18.

M_{ij}, M_{oj} = Molecular weight of sample component ``j" of the gas stream at the inlet and outlet of the control device, respectively, g/g-mole (lb/lb-mole).

Q_i, Q_o = Flow rate of gas stream at the inlet and outlet of the control device, respectively, dscm/min (dscf/min), as determined by Reference Method 2, 2A, 2C, or 2D.

K_2 = 2.494 x 10^{-6} (1/ppm)(g-mole/scm) (kg/g) (min/hr) (metric units), where standard temperature for (g-mole/scm) is 20 ^{o}C, or
= 1.557 x 10 -7 (1/ppm) (lb-mole/scf) (min/hr) (English units), where standard temperature for (lb-mole/scf) is 68 ^{o}F.

d. Emissions of hazardous air pollutants shall comply with the Early Reductions Limits in **Section B (26) Group Requirement 4 – Early Reductions Requirements**.

Compliance Demonstration Method:

1) To calculate the MeCl and Methanol emission rates for Early Reductions:

i. The permittee shall monitor HAP concentrations as specified in the permit sections for emission points A2.06, A10.08 and D10.01.

ii. Hourly mass flow will be determined by using a flowmeter.

iii. Hourly uncontrolled HAP emissions shall be calculated by multiplying the HAP concentration determined that day by the measured hourly mass flow rates.

iv. Controlled emissions shall be calculated by multiplying uncontrolled emissions by (1-control efficiencies determined by from the most recent performance test).

v. Monthly HAP emissions shall be calculated by summing the hourly HAP emissions.

2) To calculate HCl emission rates for Early Reductions:
HCl emissions = (HCl emission factor in KYEIS) x (Total monthly TOC)

3) To calculate Chlorine emission rates for Early Reductions:
Cl_2 emissions = (Cl_2 emission factor in KYEIS) x (Total monthly TOC

combusted)

SECTION B - EMISSION POINTS, AFFECTED FACILITIES, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS

(6) VENT HEADER SYSTEM: (Continued)

2. Emission Limitations: (Continued)

e. Emissions of volatile organic compounds shall comply with the plant-wide VOC allowable limit in **Section B (23) Group Requirement 1 – Previous Synthetic Minors (VOC)**.

f. Emissions of particulate shall comply with the plant-wide particulate allowable limit in **Section B (24) Group Requirement 1 – Previous Synthetic Minors (PM_{10})**.

3. Testing Requirements:

a. The permittee shall conduct performance tests as specified in the new or revised Subpart Kb Operating Plan in accordance with (d) Construction, Start-Up, and Initial Compliance Demonstration Requirements in **Section G – General Conditions** for construction, reconstruction or modification of any Subpart Kb storage tanks in **Section B (3) Storage Tanks – Category 2** or of any component of the Vent Header System and control devices that may affect compliance with the emission or operating limitations in 40 CFR 60 Subpart Kb.

b. The permittee shall conduct a performance test to determine compliance with the percent reduction efficiency in accordance with (d) Construction, Start-Up, and Initial Compliance Demonstration Requirements in **Section G – General Conditions** for construction, reconstruction or modification of any Subpart NNN distillation units in **Section B (5) Distillation Units – Category 1** or of any component of the Vent Header System and control devices that may affect the reduction efficiency of TOC (less methane and ethane).

c. The permittee shall conduct performance testing in accordance with (d) Construction, Startup, and Initial Compliance Demonstration Requirements in **Section G – General Conditions** for emissions of HAP (Early Reductions), HCl/Cl_2 (Early Reductions), VOC (Synthetic Minor Limit), and PM_{10} (Synthetic Minor Limit).

d. At least twelve months before the expiration date of this permit, the permittee shall conduct a performance test on the P-10/T-10 control system. This requirement shall be waived by the Division if a performance test has been performed within the previous two years.

e. Reference Method 21 of 40 CFR 60 Appendix A shall be used for determining VOC leaks and no detectable emissions in accordance with 40 CFR 60.485 (b). [40 CFR 60.112b (a)(3)(i), Subpart Kb]

f. The following reference methods in 40 CFR 60 Appendix A shall be used to determine compliance with the percent reduction efficiency. [40 CFR 60.664(b)(1)-(3), Subpart NNN]

i. Method 1 or 1A, as appropriate, for selection of the sampling sites. The control device inlet sampling site for determination of vent stream molar composition or TOC (less methane and ethane) reduction efficiency shall be prior to the inlet of the control device and after the recovery system.

ii. Method 2, 2A, 2C, or 2D, as appropriate, for determination of the gas volumetric flow rates.

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(6) VENT HEADER SYSTEM: (Continued)

3. Testing Requirements: (Continued)

iii. Method 18 to determine the concentration of TOC in the control device outlet and the concentration of TOC in the inlet when the reduction efficiency of the control device is to be determined.

iv. The sampling time for each run shall be 1 hour in which either an integrated sample or four grab samples shall be taken. If grab sampling is used then the samples shall be taken at 15-minute intervals. [40 CFR 60.664(b)(4)(i)]

4. Specific Monitoring Requirements:

For the T-10 Unit:

a. The permittee shall monitor the parameters of the Vent Header System and control devices in accordance with the Subpart Kb Operating Plan. [40 CFR 60.113b(c)(2)]

b. The permittee shall install, calibrate, maintain, and operate according to manufacturer's specifications the following equipment: [40 CFR 60.663(a)]

i. A temperature monitoring device equipped with a continuous recorder and having an accuracy of ±1 percent of the temperature being monitored expressed in degrees Celsius or ± 0.5 ^{o}C, whichever is greater. The temperature monitoring device shall be installed in the firebox of the thermal oxidizer.

ii. A flow indicator that provides a record of vent stream flow to the thermal oxidizer at least once every hour for each 40 CFR 60 Subpart NNN distillation unit. The flow indicator shall be installed in the vent stream from each 40 CFR 60 Subpart NNN distillation unit at a point closest to the inlet of the thermal oxidizer and before being combined with any other vent stream. For all other affected facilities that vent to the Vent Header System, the permittee may install the flow indicator(s) at a point after two or more vent streams have been combined.

For the T-10 HCl Absorber and the B-2 Vent Scrubber:

c. Pursuant to 40 CFR 63 Subpart D, the permittee shall install, calibrate, maintain, and operate according to manufacturer's specifications the following equipment:

i. A flow indicator that provides a record of the water flow to the control device. Flow shall be monitored at least once every 15 minutes during periods of operation.

ii. A flow indicator that provides a record of the vent stream flow to the control device. Flow shall be monitored at least once every 15 minutes during periods of operation.

iii. Records of periods of operations. All periods of operation of the B-2 Vent Scrubber shall be reported to the Division pursuant to the requirements of 401 KAR 50:055.

For the P-10 Unit:

d. Pursuant to 40 CFR 63 Subpart D, the permittee shall install, calibrate, maintain, and operate according to manufacturer's specifications the following equipment:

i. An on-line IR Analyzer equipped with a continuous recorder calibrated for ethylene to record at least once every 15 minutes during periods of operation.

SECTION B - EMISSION POINTS, AFFECTED FACILITIES, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS

(6) VENT HEADER SYSTEM: (Continued)

ii. A flow indicator that provides records of the vent stream flow to the adsorption units from the A-2 and A-10 Process Areas. Flow shall be monitored and recorded at least once every 15 minutes during periods of operation.

e. Pursuant to 40 CFR 60.663(e) and 40 CFR 60.703(e), the permittee shall, as specified by the Administrator, monitor the process parameter(s) which would indicate proper operation and maintenance of the P-10 adsorber.

5. Specific Recordkeeping Requirements:

For the T-10 Unit:

a. The permittee shall keep a record of the measured values of the parameters monitored in accordance with the Subpart Kb Operating Plan after installing the Vent Header System and control devices for at least 5 years. [40 CFR 60.115b (a) and (c)(2), Reporting and recordkeeping requirements, and Condition F.2 of SECTION F]

b. The permittee shall keep an up-to-date, readily accessible record of the following data measured during each performance test where the emission control efficiency of a control device is determined: [40 CFR 60.665 (b)(1)]

i. The average firebox temperature of the incinerator measured at least every 15 minutes and averaged over the same time period of the performance testing, and

ii. The percent reduction of TOC determined as specified in 40 CFR 60.664(b) achieved by the incinerator.

c. The permittee shall keep up-to-date, readily accessible continuous records of the following operating parameter information:

i. The equipment operating parameters specified to be monitored under 40 CFR 60.663(a)

ii. Periods of operation during which the parameter boundaries established during the most recent performance test are exceeded, defined as all 3-hour periods of operation during which the average combustion temperature of the thermal oxidizer was more than 28 C (50 F) below the average combustion temperature during the most recent performance test at which compliance with 40 CFR 60.662(a) was determined. [40 CFR 60.665 (c)(1)]

d. The permittee shall keep up to date, readily accessible continuous records of the flow indication specified under 40 CFR 60.663(a)(2), as well as up-to-date, readily accessible records of all periods when the vent stream is diverted from the control device or has no flow rate. [40 CFR 60.665 (d)]

e. Pursuant to 40 CFR 63 Subpart D, the permittee shall keep records of the total organic compounds (TOC, less methane and ethane) combusted each month.

For the P-10 Unit:

f. Pursuant to 40 CFR 60.663(e) and 40 CFR 60.703(e), the permittee shall, as specified by the Administrator, maintain records of the parameter(s) which would indicate proper operation and maintenance of the P-10 adsorber.

g. Pursuant to 40 CFR 63 Subpart D, the permittee shall maintain the following records:

i. The rejection efficiency for VOC and MeCl as obtained in the source last performance test.

SECTION B - EMISSION POINTS, AFFECTED FACILITIES, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS

(6) VENT HEADER SYSTEM: (Continued)

5. Specific Recordkeeping Requirements: (continued)

ii. The average hourly concentration of ethylene.

iii. The estimate vent flow rate based on the incoming vent flow rates from A-2 and A-10 process areas.

For the T-10 HCl Absorber **and** the B-2 Vent Scrubber:

h. Pursuant to 40 CFR 63 Subpart D, the permittee shall maintain up-to-date, readily accessible, continuous records of the water flow to the T-10 HCl absorber and the B-2 Vent scrubber by computer system or strip chart recorder.

6. Specific Reporting Requirements:

For the T-10 and P-10 Units:

a. The "Subpart Kb Operating Plan" shall contain the information listed below: [40 CFR 60.113b(c)(1)]

i. Documentation that the Vent Header System and control devices will achieve the required control efficiency during maximum loading conditions. This documentation is to include a description of the gas stream which enters the control device, including flow and VOC content under varying liquid level conditions (dynamic and static) and manufacturer's design specifications for the control device. If the control device or the closed vent capture system receives vapors, gases, or liquids other than fuels from sources that are not designated sources under this subpart, the efficiency demonstration is to include consideration of all vapors, gases, and liquids received by the closed vent capture system and control device If an enclosed combustion device with a minimum residence time of 0.75 seconds and a minimum temperature of 816 °C (1500 °F) is used to meet the 95 percent requirement, documentation that those conditions will exist is sufficient to meet the requirements of this paragraph.

ii. A description of the parameter or parameters to be monitored to ensure that the Vent Header System and control devices will be operated in conformance with its design and an explanation of the criteria used for selection of that parameter (or parameters).

b. The permittee shall include the performance test data required to be recorded in 5.b. above in the report of the initial performance test and all subsequently required performance tests where the emission control efficiency of a control device is determined. [40 CFR 60.665 (b)(1)]

c. The division may at any time require a report of the operating parameter data in 5.c. above. [40 CFR 60.665 (c)(1)]

d. For the P-10 Unit, pursuant to 40 CFR 60.665 (l) and 40 CFR 60.705 (l), the permittee shall submit semi-annual records all exceedances of the monitored parameters

e. Emissions of hazardous air pollutants (HAPs) from the Vent Header System shall be reported as described in **Section B (26) Group Requirement 4 - Early Reductions Requirements**.

SECTION B - EMISSION POINTS, AFFECTED FACILITIES, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS

(6) VENT HEADER SYSTEM: (Continued)

6. Specific Reporting Requirements:

f. The permittee shall recalculate the emission factors for HCl and Cl_2 after each performance test and submit the results to the division with a request to update the KYEIS emission factors.

For the T-10, P-10, **and** B2.03 Units:

g. VOC emissions shall be reported as described in **Section B (23) Group Requirement 1 - Previous Synthetic Minors (VOC)**.

For the T-10 Unit:

h. PM_{10} emissions shall be reported as described in **Section B (24) Group Requirement 2 - Previous Synthetic Minors (PM_{10})**.

7. Specific Control Equipment Operating Conditions:

See previous sections.

8. Alternate Operating Scenarios:

None

9. Compliance Schedule:

a. Within 30 days after the issuance of the final permit, the permittee, pursuant to 40 CFR 60.663(e) and 40 CFR 60.703(e) shall provide to the Administrator of the U.S. Environmental Protection Agency (U.S. EPA) information describing the operation of the P-10 Adsorber and the process parameter(s) which would indicate proper operation and maintenance of the device. The Administrator may request further information and will specify appropriate monitoring procedures or requirements.

b. Within 180 days of approval of a monitoring plan for the P-10 Unit by the Administrator, the permittee shall perform the following or equivalent performance test:
   i. Method 18, 25 or equivalent to determine the concentration of TOC in the Adsorber outlet and inlet.
   ii. Method 2, 2A, 2B, 2C or 2D, as appropriate to determine flowrate.

c. At least 30 days prior to the date of the required performance tests for the P-10 Adsorber, the permittee shall complete and return a Compliance Test Protocol (Form DEP6027) to the Division's Frankfort Central Office. The protocol form shall be used by the Division to determine if a pretest meeting is required. The Division shall be notified of the actual test date at least 10 days prior to the tests.

10. Compliance Certification Requirements:

The permittee shall submit a progress certification form (DEP 7007BB) upon meeting the requirements above in section 9a and 9b.

SECTION B - EMISSION POINTS, AFFECTED FACILITIES, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS

(7) **PIPELINE EQUIPMENT - CATEGORY 1:** This category covers the regulated pipeline components i.e., those subject to equipment leak standards.

EIS	Dow ID	Process Area	Count	Type of Connector
--	(--)	Barge Unloading Dock	22	Light Liquid Valves
			39	Light Liquid Connectors
--	(--)	D-1 Process Area	4	Light Liquid Pumps
			55	Vapor Pressure Relief Valves
			1	Compressor
			260	Vapor Valves
			538	Light Liquid Valves
			543	Vapor Connectors
			1770	Light Liquid Connectors
--	(--)	D-10 Process Area	22	Vapor Pressure Relief Valves
			3	Liquid Pressure Relief Valves
			1	Compressor
			224	Vapor Valves
			509	Light Liquid Valves
			562	Vapor Connectors
			703	Light Liquid Connectors

Note: The pipeline equipment count listed above reflects an accurate count of the equipment as of the date of issuance of this permit. The permittee may add or remove pipeline equipment from the Barge Unloading Dock, D-1 and D-10 Process Areas without a permit revision as long as the equipment continues to comply with the requirements listed below.

APPLICABLE REGULATIONS:

a. Regulation 401 KAR 63:101 (40 CFR 63 Subpart F) applies to the Barge Unloading Dock, D-1 and D-10 Process Areas.

b. Regulation 401 KAR 63:160(40 CFR 63 Subpart H) applies to the pipeline equipment in the Barge Unloading Dock, D-1 and D-10 Process Areas.

SECTION B - EMISSION POINTS, AFFECTED FACILITIES, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS

(7) PIPELINE EQUIPMENT - CATEGORY 1: (Continued)

c. Regulation 401 KAR 60:480 (40 CFR 60 Subpart VV) applies to the pipeline equipment in the Barge Unloading Dock, D-1 and D-10 Process Areas. However, in accordance with 40 CFR 63.160 (c), the permittee has elected to apply the requirements of 40 CFR 63 Subpart H to all the pipeline equipment in the Barge Unloading Dock, D-1 and D-10 Process Areas. Therefore, the permittee is only required to comply with 40 CFR 63 Subpart H. All VOC in the equipment shall be considered, for purposes of applicability and compliance with Subpart H, as if it were organic hazardous air pollutant (HAP). Compliance with Subpart H shall be deemed to constitute compliance with Subpart VV.

1. Operating Limitations: For the pipeline equipment, the permittee shall implement a leak detection and repair (LDAR) program containing the following elements:

a. Each piece of pipeline equipment within the Barge Unloading Dock, D-1 and D-10 Process Areas shall be identified such that it can be distinguished readily from equipment that is not subject to 40 CFR 63 Subpart H [40 CFR 63.162 (c)].

b. When a leak is detected as specified in 40 CFR 63.163 and 63.164; 63.168 and 63.169; and 63:172 through 63.174, the procedures described in 40 CFR 63.162 (f) (1) - (3) shall be followed to identify the leaking piece.

c. Specific standards for each type of pipeline equipment described under **2. Emission Limitations** below.

Compliance Demonstration Method: Pursuant to 40 CFR 63.162 (a), compliance with 40 CFR 63 Subpart H shall be determined by review of the records required by 63.181 and the reports required by 63.182, review of performance test results, and by inspections.

2. Emission Limitations: The permittee shall incorporate the following elements in the required leak detection and repair (LDAR) program. If any of the equipment qualifies for the specific exemptions available in 40 CFR 63 Subpart H, the permittee shall maintain records of the reason(s) why the equipment is exempt.

a. Standards: Pumps in light liquid service [40 CFR 63.163]:

40 CFR 63.163 (a)	Implementation and compliance provisions
40 CFR 63.163 (b)	Monitoring requirements, leak detection levels, frequency of monitoring
40 CFR 63.163 (c)	Repair procedures and time frames
40 CFR 63.163 (d)	Calculation procedures to determine percent leaking pumps and requirements for quality improvement programs
40 CFR 63.163 (e)-(j)	Exemptions for specific types of pumps

b. Standards: Compressors [40 CFR 63.164]:

40 CFR 63.164 (a)-(e)	Operations requirements
40 CFR 63.164 (f)	Criteria for leak detection
40 CFR 63.164 (g)	Repair procedures and time frames

40 CFR 63.164 (h),(i) Exemptions for specific types of compressors

SECTION B - EMISSION POINTS, AFFECTED FACILITIES, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS

(7) PIPELINE EQUIPMENT - CATEGORY 1: (Continued)

c. Standards: Pressure relief devices in gas/vapor service [40 CFR 63.165]:
- 40 CFR 63.165 (a) Operational requirements
- 40 CFR 63.165 (b) Pressure release procedures
- 40 CFR 63.165 (c)-(d) Exemptions for specific types of pressure relief devices

d. Standards: Sampling Connection Systems [40 CFR 63.166]:
- 40 CFR 63.166 (a)-(c) Operational requirements

e. Standards: Open-ended valves or lines [40 CFR 63.167]:
- 40 CFR 63.167 (a)-(c) Operational requirements
- 40 CFR 63.167 (d)-(e) Exemptions for specific types of valves

f. Standards: Valves in gas/vapor service and in light liquid service [40 CFR 63.168]:
- 40 CFR 63.168 (a) Operational requirements
- 40 CFR 63.168 (b)-(d) Monitoring requirements and intervals
- 40 CFR 63.168 (e) Calculation procedures to determine percent leaking valves
- 40 CFR 63.168 (f) Leak repair time frames
- 40 CFR 63.168 (g) First attempt repair procedures
- 40 CFR 63.168 (h)-(i) Exemptions for unsafe-to-monitor and difficult-to-monitor valves

g. Standards: Pumps, valves, connectors, agitators in heavy liquid service; instrumentation systems; and pressure relief devices in liquid service [40 CFR 63.169]:
- 40 CFR 63.169 (a) Monitoring requirements and frequency
- 40 CFR 63.169 (b) Leak detection levels
- 40 CFR 63.169 (c),(d) Leak repair time frames and procedures

h. Standards: Delay of repair [40 CFR 63.171]:
- 40 CFR 63.171 Allowances for delay of repair

i. Standards: Connectors in gas/vapor service and in light liquid service [40 CFR 63.174]:
- 40 CFR 63.174 (a) Operational requirements
- 40 CFR 63.174 (b) Monitoring requirements and intervals
- 40 CFR 63.174 (c) Procedures for open connectors or connectors with broken seals
- 40 CFR 63.174 (d) Leak repair time frames
- 40 CFR 63.174 (e) Monitoring frequency for repaired connectors
- 40 CFR 63.174 (f)-(h) Exemptions for unsafe-to-monitor, unsafe-to-repair, inaccessible, or ceramic connectors
- 40 CFR 63.174 (i) Calculation procedures to determine percent leaking connectors

40 CFR 63.174 (j) Optional credit for removed connectors

SECTION B - EMISSION POINTS, AFFECTED FACILITIES, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS

(7) PIPELINE EQUIPMENT - CATEGORY 1: (Continued)

j. Quality improvement program for valves [40 CFR 63.175]:
Pursuant to 40 CFR 63.168 (d)(1)(ii), in Phase III, the permittee may elect to implement the following quality improvement programs if the percent of leaking valves is equal to or exceeds 2 percent:

40 CFR 63.175 (a)	Quality improvement program alternatives
40 CFR 63.175 (b)	Criteria for ending quality improvement programs
40 CFR 63.175 (c)	Alternatives following achievement of less than 2 percent leaking valves target
40 CFR 63.175 (d)	Quality improvement program to demonstrate further progress
40 CFR 63.175 (e)	Quality improvement program of technology review and improvement

k. Quality improvement program for pumps [40 CFR 63.176]:
Pursuant to 40 CFR 63.163 (d)(2), if, in Phase III, calculated on a 6-month rolling average, the greater of either 10 percent of the pumps or three pumps in the Barge Unloading Dock, D-1 and D-10 Process Areas leak, the permittee shall implement the following quality improvement programs for pumps:

40 CFR 63.176 (a)	Applicability criteria
40 CFR 63.176 (b)	Criteria for ending the quality improvement program
40 CFR 63.176 (c)	Criteria for resumption of the quality improvement program
40 CFR 63.176 (d)	Quality improvement program elements

Compliance Demonstration Method:
A copy of the leak detection and repair (LDAR) program meeting the criteria listed above shall be kept available at a readily accessible location for inspection.

3. Testing Requirements:
The permittee shall comply with the following test methods and procedures requirements pursuant to 40 CFR 63.180 (a):

40 CFR 63.180 (b)	Monitoring procedures, test methods and calibration procedures
40 CFR 63.180 (c)	Leak detection monitoring procedures
40 CFR 63.180 (d)	Procedures for determining organic HAP service applicability

Fulfill all testing requirement per **2. Emission Limitations**

4. Specific Monitoring Requirements:
a. See **3. Testing Requirements** above.
b. Fulfill all monitoring requirements per **2. Emission Limitations**

SECTION B - EMISSION POINTS, AFFECTED FACILITIES, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS

(7) PIPELINE EQUIPMENT - CATEGORY 1: (Continued)

5. Specific Recordkeeping Requirements: [40 CFR 63.181]

a. The permittee may comply with the recordkeeping requirements for the Barge Unloading Dock, D-1 and D-10 Process Areas in one recordkeeping system if the system identifies each record by process unit and the program being implemented (e.g. quarterly monitoring, quality improvement) for each type of equipment. All records required by 40 CFR 63.181 shall be maintained in a manner that can be readily accessed at the plant site.

b. The permittee shall maintain all records pertaining to the pipeline equipment required by 40 CFR 63.181 (b).

c. For visual inspections, the permittee shall document that the inspection was conducted and the date of the inspection. These records shall be kept for a period of five years, according to 40 CFR 63.181 (c).

d. When a leak is detected, the information specified in 40 CFR 63.181 (d) shall be recorded and kept for five years.

e. If the permittee implements any of the quality improvement programs required by 40 CFR 63.175 and 63.176, the records specified in 40 CFR 63.181 (h)(1)-(9) shall be maintained for the period of the quality improvement program for the Barge Unloading Dock, D-1 and D-10 Process Areas.

6. Specific Reporting Requirements:

The permittee shall submit the following reports:

a. 40 CFR 63.182 (a)(1), Initial Notification. The permittee has fulfilled this requirement through documentation dated October 20, 1995 submitted to the Division.

b. 40 CFR 63.182 (a)(2), Notification of Compliance Status. The permittee has fulfilled this requirement through documentation dated October 20, 1995 submitted to the Division.

c. 40 CFR 63.182 (a)(3), Periodic Reports - The permittee shall submit to the Division, semiannually, the information required by 40 CFR 63.182 (d)(2). The semi-annual reports shall be submitted by February 28th and August 31st of each year and shall cover the last 6 months and the first 6 months of each calendar year respectively.

d. VOC emissions shall be reported as described in **Section B (23) Group Requirement 1 - Previous Synthetic Minors (VOC)**.

7. Specific Control Equipment Operating Conditions: None

8. Alternate Operating Scenarios: None

SECTION B - EMISSION POINTS, AFFECTED FACILITIES, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS

(7) **PIPELINE EQUIPMENT - CATEGORY 2:** This category covers the non-regulated pipeline equipment i.e., equipment that is not subject to any equipment leaks standard but does not qualify as an insignificant activity because combined emissions are greater than 5 tpy.

EIS	Dow ID	Process Area	Count	Type of Connector
--	(--)	Non-HON Areas	83	Light Liquid Pumps
			225	Vapor Pressure Relief Valves
			24	Compressor
			3457	Vapor Valves
			3000	Light Liquid Valves
			6148	Vapor Connectors
			5000	Light Liquid Connectors

Note: The pipeline equipment count listed above are approximate. The permittee may add or remove pipeline equipment without a permit revision as long a modification does not trigger new applicable requirements.

1. **Operating Limitations:** None

2. **Emission Limitations:** None

3. **Testing Requirements:** None.

4. **Specific Monitoring Requirements:** None

5. **Specific Recordkeeping Requirements:** None

6. **Specific Reporting Requirements:**
VOC emissions shall be reported as described in **Section B (23) Group Requirement 1 - Previous Synthetic Minors (VOC)**.

7. **Specific Control Equipment Operating Conditions:** None

8. **Alternate Operating Scenarios:** None

SECTION B - EMISSION POINTS, AFFECTED FACILITIES, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS

(8) A-1 PROCESS AREA:

-- (A1.02) A-1 Silicon/Sand Hoppers (1080, 1100, 1180):
All hoppers vented through a single baghouse (1132)

APPLICABLE REGULATIONS:
Regulation 401 KAR 59:010 applies to the particulate and visible emissions from each of the Silicone/Sand Hoppers in the A-1 Process Area.

1. Operating Limitations: The baghouse on the Silicon/Sand Hoppers shall control particulate emissions and be operated properly in accordance with manufacturer's specifications and/or standard operating procedures at all times the hoppers are in use.

Compliance Demonstration Method: The permittee shall record the occurrence, duration, cause, and any corrective action taken for each incident when the hoppers are in operation but the baghouse is not.

2. Emission Limitations:
For the A-1 Silicon/Sand Hoppers (A1.02):
a. Pursuant to Regulation 401 KAR 59:010, Section 3(2), emissions of particulate matter shall not exceed 32.37 lb/hr.
b. Pursuant to Regulation 401 KAR 59:010, Section 3(1), the opacity of visible emissions shall not equal or exceed 20 percent.

Compliance Demonstration Method:
a. Hourly Mass Emission Rate = [Hourly air (or nitrogen) flowrate through baghouse] x [Manufacturer-guaranteed grain loading]
b. Opacity Limit - During all periods of operation or malfunction of the baghouse, the permittee shall determine compliance through maintenance of the records required by Item e. under **5.(Specific Recordkeeping Requirements below)**.

3. Testing Requirements:
Pursuant to Regulations 401 KAR 59:005, Section 2(2) and 401 KAR 50:045, Section 1, performance testing using the Reference Methods specified in Regulation 401 KAR 50:015 shall be conducted as required by the Division.

4. Specific Monitoring Requirements:
a. The permittee shall install, calibrate, maintain, and operate according to manufacturer's specification a monitoring device for the continuous measurement of the differential static pressure across the baghouse.
b. The permittee shall monitor the hourly flowrate. (cfh) of air (or nitrogen) through each baghouse when the baghouse is in operation.

SECTION B - EMISSION POINTS, AFFECTED FACILITIES, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS

(8) A-1 PROCESS AREA: (Continued)

5. Specific Recordkeeping Requirements:

The permittee shall maintain records of the following information:

a. Design and/or manufacturer's specifications for the baghouse including manufacturer/vendor guaranteed outlet grain loading (gr/scf).
b. The operational procedures and preventive maintenance records for the baghouse.
c. Continuous records of the pressure drop across the baghouse during all periods of operation.
d. Hourly records of the flowrate. (cfh) of air (or nitrogen) through the baghouse during all periods of operation.
e. During all periods of operation or malfunction of the baghouse, a daily (calendar day) log of the following information shall be kept:
    i. Whether any air emissions were visible from the hopper(s) associated with the baghouse of concern.
    ii. Whether the visible emissions were normal for the process.

    If abnormal visible emissions are observed, the permittee shall record the following information:
    iii. The color of the emissions and whether the emissions were light or heavy.
    iv. The cause of the abnormal visible emissions.
    v. Any corrective actions taken.

6. Specific Reporting Requirements: None

7. Specific Control Equipment Operating Conditions: None

8. Alternate Operating Scenarios: None

SECTION B - EMISSION POINTS, AFFECTED FACILITIES, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS

(9) A-2 PROCESS AREA:

-- (A2.02) A-2 Silicon/Sand Hoppers: (3513, 3514)
Both hoppers vented through a single baghouse (3510)

APPLICABLE REGULATIONS:
Regulation 401 KAR 59:010 applies to the particulate and visible emissions from each of the Silicon/Sand Hoppers in the A-2 Process Area.

1. Operating Limitations: The baghouse on the Silicon/Sand Hoppers shall control particulate emissions and be operated properly in accordance with manufacturer's specifications and/or standard operating procedures at all times the hoppers are in use.

Compliance Demonstration Method: The permittee shall record the occurrence, duration, cause, and any corrective action taken for each incident when the hoppers are in operation but the baghouse is not.

2. Emission Limitations:
For the A-2 Silicon/Sand Hoppers (A2.02):
a. Pursuant to Regulation 401 KAR 59:010, Section 3(2), emissions of particulate matter shall not exceed 32.37 lb/hr.
b. Pursuant to Regulation 401 KAR 59:010, Section 3(1), the opacity of visible emissions shall not equal or exceed 20 percent.

Compliance Demonstration Method:
a. a. Hourly Mass Emission Rate = [Hourly air (or nitrogen) flowrate. through baghouse] x [Manufacturer-guaranteed grain loading]
b. b. Opacity Limit - During all periods of operation or malfunction of the baghouse, the permittee shall maintain the records required by Item e. under **5. Specific Recordkeeping Requirements below**.

3. Testing Requirements:
Pursuant to Regulations 401 KAR 59:005, Section 2(2) and 401 KAR 50:045, Section 1, performance testing using the Reference Methods specified in Regulation 401 KAR 50:015 shall be conducted as required by the Division.

4. Specific Monitoring Requirements:
a. The permittee shall install, calibrate, maintain, and operate according to manufacturer's specification a monitoring device for the continuous measurement of the differential static pressure across the baghouse.
b. The permittee shall monitor the hourly flowrate. (cfh) of air (or nitrogen) through the baghouse when the baghouse is in operation.

SECTION B - EMISSION POINTS, AFFECTED FACILITIES, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS

(9) A-2 PROCESS AREA: (Continued)

5. Specific Recordkeeping Requirements:

The permittee shall maintain records of the following information:

a. Design and/or manufacturer's specifications for the baghouse including manufacturer/vendor guaranteed outlet grain loading (gr/scf).

b. The operational procedures and preventive maintenance records for the baghouse.

c. Continuous records of the pressure drop across the baghouse during all periods of operation.

d. Hourly records of the flowrate. (cfh) of air (or nitrogen) through the baghouse during all periods of operation.

e. During all periods of operation or malfunction of the baghouse, a daily (calendar day) log of the following information shall be kept:

   i. Whether any air emissions were visible from the hopper(s) associated with the baghouse of concern.

   ii. Whether the visible emissions were normal for the process.

   If abnormal visible emissions are observed, the permittee shall record the following information:

   iii. The color of the emissions and whether the emissions were light or heavy.

   iv. The cause of the abnormal visible emissions.

   v. Any corrective actions taken.

6. Specific Reporting Requirements: None

7. Specific Control Equipment Operating Conditions: None

8. Alternate Operating Scenarios: None

SECTION B - EMISSION POINTS, AFFECTED FACILITIES, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS

(9) A-2 PROCESS AREA:

-- (A2.06) A-2 Secondary Recovery (# 3595):
Vent Condenser (3644B)

APPLICABLE REGULATIONS:
Regulation 401 KAR 63:070 (40 CFR 63 Subpart D) applies to the emissions of methyl chloride.

1. Operating Limitations:

a. Emissions of hazardous air pollutants (HAPs) shall comply with the Early Reduction Limits.
b. During operation, the A-2 column shall vent to the Vent Header System at all times except as provided in c. below (V-99-050, Netting emissions reduction requirements).
c. The A-2 column shall vent directly to the atmosphere less than ten percent (10%) of the time that it is operational (V-99-050, Netting emissions reduction requirements).

Compliance Demonstration Method:
Emissions of Methyl Chloride and VOC shall be calculated as follows:

a. Dow Corning shall take daily samples of vent gas using an on-line GC (following the 3644B Condenser) for the A-2 Secondary Recovery line and analyze for methyl chloride and TOC (less methane and ethane) during all periods that A-2 Column is venting to atmosphere and not to the vent header system.
b. Hourly flow rates shall be determined by using differential pressure flowmeters.
c. Hourly HAP and VOC emissions shall be calculated be multiplying by the daily HAP and VOC concentrations by the average hourly flow rates.
d. Monthly HAP emissions shall be calculated by summing the hourly HAP emissions.
e. Monthly VOC emissions shall be calculated by summing the hourly VOC emissions.
f. The permittee shall determine the percentage of time that the A-2 column vents directly to the atmosphere through the records required in Item f. of **Specific Recordkeeping Requirements**.

2. Emission Limitations:

a. Emissions of hazardous air pollutants shall comply with the Early Reductions Limits.
b. Emissions of volatile organic compounds shall comply with the plant-wide VOC allowable limit.

3. Testing Requirements:

See Early Reductions and VOC Synthetic Minor Group Requirements.

4. Specific Monitoring Requirements:

a. Vent HAP and TOC (less methane and ethane) composition shall be determined on a daily basis.
b. Vent flowrate shall be determined on an hourly average basis.

SECTION B - EMISSION POINTS, AFFECTED FACILITIES, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS

(9) A-2 PROCESS AREA: (Continued)

5. Specific Recordkeeping Requirements:

The permittee shall maintain up-to-date, readily accessible records of the following information:

a. Date and time of all measurements.
b. HAP concentration recorded on the LIMS or PI system.
c. Average hourly flow rate.
d. Periods of monitor downtime and the reason(s) for the downtime.
e. Corrections made in data prior to reporting and the reason(s) for the corrections.
f. The permittee shall keep records of the total number of hours that the A-2 column is operational and the number of hours that the A-2 column vents directly to the Vent Header System.

6. Specific Reporting Requirements:

a. HAP emissions shall be reported as described in **Section B (26) Group Requirement 4 - Early Reductions Requirements**.
b. VOC emissions shall be reported as described in **Section B (23) Group Requirement 1 - Previous Synthetic Minors (VOC)**.

7. Specific Control Equipment Operating Conditions: None.

8. Alternate Operating Scenarios: None

SECTION B - EMISSION POINTS, AFFECTED FACILITIES, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS

(10) A-10 PROCESS AREA:

-- (A10.02) A-10 Silicon/Sand Hoppers: (5110, 5115)
Both hoppers vented through a single baghouse (5112)

-- (A10.05) A-10 Silicon/Sand Hoppers: (5210, 5215)
Both hoppers vented through a single baghouse (5212)

APPLICABLE REGULATIONS:
Regulation 401 KAR 59:010 applies to the particulate and visible emissions from each of the Silicon/Sand Hoppers in the A-10 Process Area.

1. Operating Limitations: The baghouses on the Silicon/Sand Hoppers shall control particulate emissions and be operated properly in accordance with manufacturer's specifications and/or standard operating procedures at all times the hoppers are in use.

Compliance Demonstration Method: The permittee shall record the occurrence, duration, cause, and any corrective action taken for each incident when the hoppers are in operation but the baghouses are not.

2. Emission Limitations:

a. For the A-10 Silicon/Sand Hoppers (A10.02):
   i. Pursuant to Regulation 401 KAR 59:010, Section 3.(2), emissions of particulate matter shall not exceed 32.37 lb/hr.
   ii. Pursuant to Regulation 401 KAR 59:010, Section 3.(1), the opacity of visible emissions shall not equal or exceed 20 percent.

b. For the A-10 Silicon/Sand Hoppers (A10.05):
   i. Pursuant to Regulation 401 KAR 59:010, Section 3.(2), emissions of particulate matter shall not exceed 32.37 lb/hr.
   ii. Pursuant to Regulation 401 KAR 59:010, Section 3.(1), the opacity of visible emissions shall not equal or exceed 20 percent.

c. For A10.02 and A10.05, see also **(23) Group Requirement 2 - Previous Synthetic Minors (PM_{10})**.

Compliance Demonstration Method:
a. a. Hourly Mass Emission Rate = [Hourly air (or nitrogen) flowrate. through baghouse] x [Manufacturer-guaranteed grain loading]
b. b. Opacity Limit - During all periods of operation or malfunction of the baghouses, the permittee shall maintain the records required by Item e. under **5.(Specific Recordkeeping Requirements below)**.

SECTION B - EMISSION POINTS, AFFECTED FACILITIES, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS

(10) A-10 PROCESS AREA: (Continued)

3. Testing Requirements: Pursuant to Regulations 401 KAR 59:005, Section 2(2) and 401 KAR 50:045, Section 1, performance testing using the Reference Methods specified in Regulation 401 KAR 50:015 shall be conducted as required by the Division.

4. Specific Monitoring Requirements:

a. The permittee shall install, calibrate, maintain, and operate according to manufacturer's specification a monitoring device for the continuous measurement of the differential static pressure across each baghouse.

b. The permittee shall monitor the hourly flowrate (cfh) of air (or nitrogen) through each baghouse when the baghouse is in operation.

5. Specific Recordkeeping Requirements:

The permittee shall maintain records of the following information:

a. Design and/or manufacturer's specifications for each baghouse including manufacturer/vendor guaranteed outlet grain loading (gr/scf).

b. The operational procedures and preventive maintenance records for each baghouses.

c. Continuous records of the pressure drop across each baghouse during all periods of operation.

d. Hourly records of the flowrate. (cfh) of air (or nitrogen) through each baghouse during all periods of operation.

e. During all periods of operation or malfunction of any of the baghouses, a daily (calendar day) log of the following information shall be kept:

   i. Whether any air emissions were visible from the hopper(s) associated with the baghouse(s) of concern.

   ii. Whether the visible emissions were normal for the process.

   If abnormal visible emissions are observed, the permittee shall record the following information:

   i. The color of the emissions and whether the emissions were light or heavy.

   ii. The cause of the abnormal visible emissions.

   iii. Any corrective actions taken.

6. Specific Reporting Requirements: None

7. Specific Control Equipment Operating Conditions: None

8. Alternate Operating Scenarios: None

SECTION B - EMISSION POINTS, AFFECTED FACILITIES, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS

(10) A-10 PROCESS AREA:

-- (A10.08) A-10 Secondary Recovery (# 5192):
Coolant: Syltherm

-- (A10.08) A-10 Absorber

APPLICABLE REGULATIONS:
Regulation 401 KAR 63:070 (40 CFR 63 Subpart D) applies to the emissions of Methyl Chloride and Hydrogen Chloride.

1. Operating Limitations: Emissions of hazardous air pollutants (HAPs) shall comply with the Early Reduction Limits.

Compliance Demonstration Method:
Emissions of Methyl Chloride and Hydrogen Chloride shall be calculated as follows:

a. Dow Corning shall take daily samples of vent gas using an on-line GC (following the 5199 Condenser) for the A-10 Secondary Recovery line and at the outlet of the 5195 Absorber for the A-10 Absorber and analyze for methyl chloride and chlorosilanes during all periods that A-10 is venting to atmosphere and not to the vent header system.
b. Continuous flow rates shall be determined by using differential pressure flowmeters.
c. Hourly HAP emissions shall be calculated be multiplying by the daily HAP concentration by the average hourly flow rates.
d. Monthly HAP emissions shall be calculated by summing the hourly HAP emissions.

2. Emission Limitations:
Emissions of hazardous air pollutants shall comply with the Early Reductions Limits.

3. Testing Requirements:
At least twelve months prior to the renewal date of this permit, the permittee shall perform a Reference Method 18 test or equivalent to determine Methyl Chloride emissions and a Reference Method 26A test to determine Hydrogen Chloride emissions.

4. Specific Monitoring Requirements:

a. Vent HAP composition shall be determined on a daily basis.
b. Vent flowrate shall be determined on a continuous basis.

5. Specific Recordkeeping Requirements:
The permittee shall maintain up-to-date, readily accessible records of the following information:

a. Date and time of measurements.
b. HAP concentration recorded on the LIMS or PI system.
c. Average daily mass flow data.
d. Periods of monitor downtime and the reason(s) for the downtime.
e. Corrections made in data prior to reporting and the reason(s) for the corrections.

REGULATIONS, AND OPERATING CONDITIONS

(10) A-10 PROCESS AREA:

6. Specific Reporting Requirements:

a. HAP emissions shall be reported as described in **Section B (26) Group Requirement 4 - Early Reductions Requirements**.

b. VOC emissions shall be reported as described in **Section B (23) Group Requirement 1 - Previous Synthetic Minors (VOC)**.

7. Specific Control Equipment Operating Conditions: None

8. Alternate Operating Scenarios: None

SECTION B - EMISSION POINTS, AFFECTED FACILITIES, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS

(11) B-2/B-3 PROCESS AREA:

-- (B2.01) B-2/B-3 CCR Scrubber (2593)
Scrubbing Liquid: Water

APPLICABLE REGULATIONS:
Regulation 401 KAR 63:070 (40 CFR 63 Subpart D) applies to the emissions of Hydrogen Chloride.

1. Operating Limitations:
Emission of hazardous air pollutants (HAPs) shall comply with the Early Reduction Limits.

Compliance Demonstration Method:
Mass balance and scrubber control efficiency.

2. Emission Limitations:
Emissions of hazardous air pollutants shall comply with the Early Reductions Limits.

3. Testing Requirements: None

4. Specific Monitoring Requirements:
The permittee shall monitor the scrubbing liquid flowrate through the scrubber.

5. Specific Recordkeeping Requirements:
The permittee shall maintain up-to-date, readily accessible records of the following information:
a. Date and time of changeout.
b. Water flowrate through the scrubber.
c. Duration of the changeout.

6. Specific Reporting Requirements:
HAP emissions shall be reported as described in **Section B (26) Group Requirement 4 - Early Reductions Requirements**.

7. Specific Control Equipment Operating Conditions:
During bed changeouts, the scrubber shall be operated in accordance with manufacturer's specifications.

8. Alternate Operating Scenarios: None

SECTION B - EMISSION POINTS, AFFECTED FACILITIES, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS

(12) B-10 PROCESS AREA:

-- (B10.01) B-10 CCR Scrubber (5393)
Scrubbing Liquid: Water

APPLICABLE REGULATIONS:
Regulation 401 KAR 63:070 (40 CFR 63 Subpart D) applies to the emissions of Hydrogen Chloride.

1. Operating Limitations:
Emissions of hazardous air pollutants (HAPs) shall comply with the Early Reduction Limits.

Compliance Demonstration Method:
Mass balance and scrubber control efficiency.

2. Emission Limitations:
Emissions of hazardous air pollutants shall comply with the Early Reductions Limits.

3. Testing Requirements: None

4. Specific Monitoring Requirements:
The permittee shall monitor the scrubbing liquid flowrate through the scrubber.

5. Specific Recordkeeping Requirements:
The permittee shall maintain up-to-date, readily accessible records of the following information:
a. Date and time of changeout.
b. Water flowrate through the scrubber.
c. Duration of the changeout.

6. Specific Reporting Requirements:
HAP emissions shall be reported as described in **Section B (26) Group Requirement 4 - Early Reductions Requirements**.

7. Specific Control Equipment Operating Conditions:
During bed changeouts, the scrubber shall be operated in accordance with manufacturer's specifications.

8. Alternate Operating Scenarios: None

SECTION B - EMISSION POINTS, AFFECTED FACILITIES, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS

(13) B-20 PROCESS AREA:

-- (B20.01) B-20 CCR Scrubber (6493)
Type: Cocurrent Venturi Wet Scrubber
Scrubbing Liquid: Water

APPLICABLE REGULATIONS:
Regulation 401 KAR 63:070 (40 CFR 63 Subpart D) applies to the emissions of Hydrogen Chloride.

1. Operating Limitations:
Emissions of hazardous air pollutants (HAPs) shall comply with the Early Reduction Limits.

Compliance Demonstration Method:
Mass balance and scrubber control efficiency.

2. Emission Limitations:
Emissions of hazardous air pollutants shall comply with the Early Reductions Limits.

3. Testing Requirements: None

4. Specific Monitoring Requirements:
The permittee shall monitor the scrubbing liquid flowrate through the scrubber.

5. Specific Recordkeeping Requirements:
The permittee shall maintain up-to-date, readily accessible records of the following information:
a. Date and time of changeout.
b. Water flowrate through the scrubber.
c. Duration of the changeout.

6. Specific Reporting Requirements:
HAP emissions shall be reported as described in **Section B (26) Group Requirement 4 - Early Reductions Requirements**.

7. Specific Control Equipment Operating Conditions:
During bed changeouts, the scrubber shall be operated in accordance with manufacturer's specifications.

8. Alternate Operating Scenarios: None

SECTION B - EMISSION POINTS, AFFECTED FACILITIES, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS

(14) C PROCESS AREAS:

-- (C2.01) C-2 Process Venturi (1344):
Type: Cocurrent Venturi Wet Scrubber
Scrubbing Liquid: Water containing 10% HCl

-- (C3.01) C-3 Process Venturi (3212):
Type: Cocurrent Venturi Wet Scrubber
Scrubbing Liquid: Water containing 10% HCl

-- (C10.01) C-10 Process Venturi (5526):
Type: Cocurrent Venturi Wet Scrubber
Scrubbing Liquid: Water containing 10% HCl

-- (C2.03) C-2 Rearranger Venturi (1315):
Type: Cocurrent Venturi Wet Scrubber
Scrubbing Liquid: Water

-- (C3.03) C-3 Rearranger Venturi (3276):
Type: Cocurrent Venturi Wet Scrubber
Scrubbing Liquid: Water

APPLICABLE REGULATIONS:

a. Regulation 401 KAR 63:070 (40 CFR 63 Subpart D) applies to the emissions of Hydrogen Chloride, Methylene Chloride, and Hexane from the C2.01 (1344), C3.01 (3212), and C10.01 (5526) scrubbers.
b. Regulation 401 KAR 63:070 (40 CFR 63 Subpart D) applies to the emissions of Hydrogen Chloride from the C2.03 (1315) and C3.03 (3276) scrubbers.

1. Operating Limitations:

Emissions of hazardous air pollutants (HAPs) shall comply with the Early Reductions Limits.

Compliance Demonstration Method:

Historical mass balance and scrubber control efficiency.

2. Emission Limitations:

Emissions of hazardous air pollutants shall comply with the Early Reductions Limits.

3. Testing Requirements:

None

4. Specific Monitoring Requirements:

Water flow rate to the scrubbers.

SECTION B - EMISSION POINTS, AFFECTED FACILITIES, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS

(14) C PROCESS AREA: (Continued)

5. Specific Recordkeeping Requirements:
Water flowrate through the scrubber.

6. Specific Reporting Requirements:

a. HAP emissions shall be reported as described in **Section B (26) Group Requirement 4 - Early Reductions Requirements**.

b. VOC emissions shall be reported as described in **Section B (23) Group Requirement 1 - Previous Synthetic Minors (VOC)**.

7. Specific Control Equipment Operating Conditions:
The venturi scrubbers shall be operated in accordance with manufacturer's specifications. The following minimum average flowrates shall be maintained. Flowrates are based on an hourly-average basis -

C2.01	-	5 GPM (gallons per minute)
C3.01	-	5 GPM (gallons per minute)
C10.01	-	4 GPM (gallons per minute)
C2.03	-	5 GPM (gallons per minute)
C3.03	-	5 GPM (gallons per minute)

8. Alternate Operating Scenarios: None

SECTION B - EMISSION POINTS, AFFECTED FACILITIES, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS

(14) C PROCESS AREA:

-- (C2.02) C-2 Process Absorber (3052A):
Type: Cocurrent Falling Film Scrubber
Scrubbing Liquid: Water

(C2.02) C-2 Process Absorber (3052B):
Type: Countercurrent Packed Scrubber
Scrubbing Liquid: Water

-- (C3.02) C-3 Process Absorber (3254A):
Type: Cocurrent Falling Film Scrubber
Scrubbing Liquid: Water

(C3.02) C-3 Process Absorber (3254B):
Type: Countercurrent Packed Scrubber
Scrubbing Liquid: Water

-- (C10.02) C-10 Process Absorber (5553A):
Type: Cocurrent Falling Film Scrubber
Scrubbing Liquid: Water

(C10.02) C-10 Process Absorber (5553B):
Type: Countercurrent Packed Scrubber
Scrubbing Liquid: Water

APPLICABLE REGULATIONS:
Regulation 401 KAR 63:070 (40 CFR 63 Subpart D) applies to the emissions of Hydrogen Chloride from each of the scrubbers listed above.

1. Operating Limitations:
Emissions of hazardous air pollutants (HAPs) from each of the scrubbers listed above shall comply with the Early Reductions Limits.

Compliance Demonstration Method:
Mass balance and scrubber control efficiency.

2. Emission Limitations:
Emissions of hazardous air pollutants from each of the scrubbers listed above shall comply with the Early Reductions Limits.

3. Testing Requirements:
See Early Reduction Requirements.

SECTION B - EMISSION POINTS, AFFECTED FACILITIES, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS

(14) C PROCESS AREA: (Continued)

4. Specific Monitoring Requirements:

The permittee shall monitor the following parameters for each of the scrubbers listed above:

a. Vent stream flow rates.
b. Scrubbing liquid flowrates.

5. Specific Recordkeeping Requirements:

The permittee shall maintain up-to-date, readily accessible records of the following information for each of the scrubbers listed above:

a. Vent stream flow rates.
b. Water flowrate through the scrubber.
c. Duration of the chlorosilane feed.

6. Specific Reporting Requirements:

HAP emissions from each scrubber shall be reported as described in **Section B (26) Group Requirement 4 - Early Reductions Requirements**.

7. Specific Control Equipment Operating Conditions:

During vent stream flow, each of the scrubbers listed above shall be operated in accordance with manufacturer's specifications.

8. Alternate Operating Scenarios: None

SECTION B - EMISSION POINTS, AFFECTED FACILITIES, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS

(15) D-1 PROCESS AREA:

-- (D1.01) D-1 MEVA Column (3415, 3416, 3422):
Methanol Scrubber (1443)
Type: Countercurrent Packed Scrubbers

APPLICABLE REGULATIONS:

Regulation 401 KAR 63:070 (40 CFR 63 Subpart D) applies to the emissions of Methanol and Methyl Chloride.

1. Operating Limitations:

Emissions of hazardous air pollutants (HAPs) shall comply with the Early ReductionsLimits.

Compliance Demonstration Method:

Emissions of methanol, methyl chloride, and VOC shall be calculated as follows:

a. The permittee shall take and analyze daily samples of vent gas (15 feet below the outlet stack) and analyze for methyl chloride, methanol, VOC once daily.
b. Hourly flow rate shall be determined by using a differential pressure flowmeter after the 3426 knock-out pot and before the water scrubber.
c. Hourly HAP and VOC emissions shall be calculated be multiplying by the HAP and VOC concentrations respectively determined that day by the hourly flow rates.
d. Monthly HAP and VOC emissions shall be calculated by summing the hourly HAP and VOC emissions respectively.

2. Emission Limitations:

a. Emissions of hazardous air pollutants shall comply with the Early Reductions Limits
b. Emissions of volatile organic compounds (VOC) shall not exceed 20 tons per year (V-99-050, Netting emissions reduction requirements).
c. c. All distillations units associated with the D Process Area shall vent to the D-1 MEVA (Methanol Vapor Absorber) Absorption Column. The permittee shall maintain a TRE index value of greater than 8.0 without use of VOC emission control devices on the vent stream from the D-1 MEVA Column [40 CFR 60.662 (c)].

3. Testing Requirements:

At least twelve months prior to the renewal date of this permit, the permittee shall perform a Reference Method 18 test or equivalent to determine methanol, methyl chloride, and VOC emissions.

4. Specific Monitoring Requirements:

a. Vent HAP composition shall be determined on a daily basis.
b. Vent flowrate shall be determined on an hourly average basis.

SECTION B - EMISSION POINTS, AFFECTED FACILITIES, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS

(15) D-1 PROCESS AREA:

5. Specific Recordkeeping Requirements:

The permittee shall maintain up-to-date, readily accessible records of the following information:

a. Date and time of measurements.
b. HAP concentration recorded on the LIMS or PI system.
c. Hourly flow data.
d. Periods of monitor downtime and the reason(s) for downtime.
e. Corrections made in data prior to reporting and the reason(s) for the corrections.

6. Specific Reporting Requirements:

a. HAP emissions shall be reported as described in **Section B (26) Group Requirement 4 - Early Reductions Requirements**.
b. VOC emissions shall be reported as described in **Section B (23) Group Requirement 1 - Previous Synthetic Minors (VOC)**.

7. Specific Control Equipment Operating Conditions:

a. The scrubber water flow rate shall be at least 2 gallons per minute while the scrubber is in operation. When the vent stream from the D-1 MEVA Column is directed to the T-10 thermal oxidizer, the permittee is not required to use the water scrubber.
b. Preventive maintenance shall be performed in accordance with the manufacturer's recommendations. Preventive maintenance shall include:
    i. Cleaning or replacement of spray nozzles.
    ii. Check/calibration of critical instruments, e.g. water flow meters or indicators.

8. Alternate Operating Scenarios: None

SECTION B - EMISSION POINTS, AFFECTED FACILITIES, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS

(16) D-10 PROCESS AREA:

-- (D10.01) D-10 MEVA Column (5760, 5761)

APPLICABLE REGULATIONS:
Regulation 401 KAR 63:070 (40 CFR 63 Subpart D) applies to the emissions of Hydrogen Chloride and Methylene Chloride.

1. Operating Limitations:
Emissions of hazardous air pollutants (HAPs) shall comply with the Early Reductions Limits.

Compliance Demonstration Method:
Emissions of Methanol and Methyl chloride shall be calculated as follows.

a. The permittee shall take samples on a daily basis of vent gas (post 5671 MEVA vent condenser) and analyze for Methyl Chloride and Methanol during periods that D-10 is venting to atmosphere and not to the T-10 oxidizer.
b. Hourly flow will be determined by using a differential pressure flowmeter.
c. Hourly HAP emission shall be calculated be multiplying by the HAP concentration determined that day by the hourly flow rates.
d. d Monthly HAP emission shall be calculated by summing the hourly HAP emissions.

2. Emission Limitations:
Emissions of hazardous air pollutants shall comply with the Early Reductions Limits.

3. Testing Requirements:
At least twelve months prior to the expiration date of this permit, the permittee shall perform a Reference Method 18 test or equivalent to determine Methanol and Methyl Chloride emissions.

4. Specific Monitoring Requirements:

a. The vent HAP composition shall be determined on a daily basis.
b. The vent flowrate shall be determined on an hourly average basis.

5. Specific Recordkeeping Requirements:
The permittee shall maintain up-to-date, readily accessible records of the following information:

a. Date and time of measurements.
b. HAP concentration recorded on the LIMS or PI system.
c. Hourly mass flow data.
d. Periods of monitor downtime and the reason(s) for the downtime.
e. Corrections made in data prior to reporting and the reason(s) for the corrections.

SECTION B - EMISSION POINTS, AFFECTED FACILITIES, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS

(16) D-10 PROCESS AREA:

6. Specific Reporting Requirements:

a. HAP emissions shall be reported as described in **Section B (26) Group Requirement 4 - Early Reductions Requirements**.

b. VOC emissions shall be reported as described in **Section B (23) Group Requirement 1 - Previous Synthetic Minors (VOC)**.

7. Specific Control Equipment Operating Conditions: None

8. Alternate Operating Scenarios: None

SECTION B - EMISSION POINTS, AFFECTED FACILITIES, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS

(17) R-10 PROCESS AREA:

-- (R10.01) R-10 Rearranger Scrubber (5284):
Type: Cocurrent Venturi Wet Scrubber
Scrubbing Liquid: Water

APPLICABLE REGULATIONS:
Regulation 401 KAR 63:070 (40 CFR 63 Subpart D) applies to the emissions of Hydrogen Chloride.

1. Operating Limitations:
Emissions of hazardous air pollutants (HAPs) shall comply with the Early Reduction Limits.

Compliance Demonstration Method:
Mass balance and scrubber control efficiency.

2. Emission Limitations:
Emissions of hazardous air pollutants shall comply with the Early Reductions Limits.

3. Testing Requirements:
None

4. Specific Monitoring Requirements:
The permittee shall monitor the liquid flowrate through the R-10 Rearranger Scrubber.

5. Specific Recordkeeping Requirements:
The permittee shall maintain up-to-date, readily accessible records of the following information:
a. Date and time of changeout.
b. Water flowrate through the scrubber.
c. Duration of the changeout.

6. Specific Reporting Requirements:
HAP emissions shall be reported as described in **Section B (26) Group Requirement 4 - Early Reductions Requirements**.

7. Specific Control Equipment Operating Conditions:
During bed changeouts, the scrubber shall be operated in accordance to manufacturer's specifications.

8. Alternate Operating Scenarios: None

SECTION B - EMISSION POINTS, AFFECTED FACILITIES, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS

(18) F-2, F-5, F-6, AND L-2 PROCESS AREAS:

--	(F2.01)	F-2 Process Vent:	Process Tank 4064
--	(F5.01)	F-5 Reactor Vent:	Process Tank 2082 and Reactor 2080
	(F5.02)	F-5 Process Vent:	Process Tank 2321
--	(F6.01)	F-6 Process Vent:	Process Tanks 2300, 2301, 2302, 2303, 2304, 2305, 2306, 2045, 2040
--	(L2.02)	L-2 Process Vent:	Process Tank 7066

APPLICABLE REGULATIONS:
Regulation 401 KAR 63:070 (40 CFR 63 Subpart D) applies to the emissions of Formaldehyde from each of the affected facilities listed above.

1. Operating Limitations:
Emissions of hazardous air pollutants (HAPs) shall comply with the Early Reductions Limits.

Compliance Demonstration Method:
Annual testing of composition and testing or calculations of vent flow rates.

2. Emission Limitations:
Emissions of hazardous air pollutants shall comply with the Early Reductions Limits.

3. Testing Requirements:
None

4. Specific Monitoring Requirements:
Annual monitoring of vent stream composition.

5. Specific Recordkeeping Requirements: N/A

6. Specific Reporting Requirements:
a. HAP emissions shall be reported as described in **Section B (26) Group Requirement 4 - Early Reductions Requirements**.
b. VOC emissions shall be reported as described in **Section B (23) Group Requirement 1 - Previous Synthetic Minors (VOC)**.

7. Specific Control Equipment Operating Conditions: None.

8. Alternate Operating Scenarios: None

SECTION B - EMISSION POINTS, AFFECTED FACILITIES, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS

(19) F-4, F-15, AND F-17 PROCESS AREAS:

--	(F4.01)	2005 Process Tank
--	(F4.02)	2007 Process Tank
--	(F15.01)	2460 Process Tank
--	(F15.02)	2462 Process Tank
--	(F15.03)	2463 Process Tank
--	(F17.01)	F-17 Process Tank

APPLICABLE REGULATIONS:
Regulation 401 KAR 63:070 (40 CFR 63 Subpart D) applies to the emissions of Ethylene Glycol and Methanol from each of the affected facilities listed above.

1. Operating Limitations:
Emissions of hazardous air pollutants (HAPs) shall comply with the Early Reductions Limits.

2. Emission Limitations:
Emissions of hazardous air pollutants shall comply with the Early Reductions Limits.

Compliance Demonstration Method:
The permittee shall calculate emissions from each process tank from charging, heatup, and evaporative losses.

3. Testing Requirements:
None

4. Specific Monitoring Requirements:
None

5. Specific Recordkeeping Requirements:
The permittee shall maintain records of the following information:
a. Number of charges or batches.
b. MSDS sheets for each emulsion formulation.

6. Specific Reporting Requirements:
a. HAP emissions shall be reported as described in **Section B (26) Group Requirement 4 - Early Reductions Requirements**.
b. VOC emissions shall be reported as described in **Section B (23) Group Requirement 1 - Previous Synthetic Minors (VOC)**.

7. Specific Control Equipment Operating Conditions:
None.

8. Alternate Operating Scenarios:

None

SECTION B - EMISSION POINTS, AFFECTED FACILITIES, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS

(20) G-2 AND G-10 PROCESS AREAS:

--	(CR.01)	Silicon Crusher: Vented through bagfilter
--	(G2.04)	G-2 Grinder (3361) and G-2 Classifier (3368) Vented through Cyclone (3370) and Baghouse (3317) in series
--	(G2.05)	G-2 Ground Silicon Bin, 3321: Vented through Bagfilter (3375)
--	(G2.06)	G-2 Ground Silicon Bin, 3322: Vented through a Bagfilter (3377)
--	(G2.07)	G-2 Sand Bin, (1615) Vented through a Bagfilter (1615F)
--	(G10.03)	G-10 Sand Bin, (5028) Vented through a Bagfilter (5029)
--	(G10.04)	G-10 Grinder (5009) and G-10 Classifier (5010): Vented through Cyclone (5011) and Baghouse (5019)
--	(G10.05)	G-10 Ground Silicon Bin, 5006: Vented through Bagfilter (5033)
--	(G10.06)	G-10 Ground Silicon Bin, 5007: Vented through Bagfilter (5034)

APPLICABLE REGULATIONS:

Regulation 401 KAR 59:010 applies to the particulate and visible emissions from each of the affected facilities listed above (CR.01, G2.04, G2.05, G2.06, G2.07, G10.03, G10.04, G10.05, G10.06).

1. **Operating Limitations:** The particulate control devices (bagfilters, baghouses, and cyclones) on each of the affected facilities (crusher, bins, grinders, classifiers) listed above shall control particulate emissions and be operated properly in accordance with manufacturer's specifications and/or standard operating procedures at all times the affected facilities are in use.

Compliance Demonstration Method: The permittee shall record the occurrence, duration, cause, and any corrective action taken for each incident when the affected facilities are in operation but the associated control devices are not.

SECTION B - EMISSION POINTS, AFFECTED FACILITIES, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS

(20) G-2 AND G-10 PROCESS AREAS: (Continued)

2. Emission Limitations:

a. For the Silicon Crusher (CR.01):
   i. Pursuant to Regulation 401 KAR 59:010, Section 3(2), emissions of particulate matter shall not exceed 32.37 lb/hr.
   ii. Pursuant to Regulation 401 KAR 59:010, Section 3(1), the opacity of visible emissions shall not equal or exceed 20 percent.

b. For each of the following - G-2 Grinder and Classifier (G2.04), G-2 Ground Silicon Bin (G2.05), G-2 Ground Silicon Bin (G2.06):
   i. Pursuant to Regulation 401 KAR 59:010, Section 3(2), emissions of particulate matter shall not exceed 21.55 lb/hr.
   ii. Pursuant to Regulation 401 KAR 59:010, Section 3(1), the opacity of visible emissions shall not equal or exceed 20 percent.

c. For the G-2 Sand Bin, 1615 (G2.07):
   i. Pursuant to Regulation 401 KAR 59:010, Section 3(2), emissions of particulate matter shall not exceed 17.19 lb/hr.
   ii. Pursuant to Regulation 401 KAR 59:010, Section 3(1), the opacity of visible emissions shall not equal or exceed 20 percent.

d. For the G-10 Sand Bin, 5028 (G10.03):
   i. Pursuant to Regulation 401 KAR 59:010, Section 3(2), emissions of particulate matter shall not exceed 17.19 lb/hr.
   ii. Pursuant to Regulation 401 KAR 59:010, Section 3(1), the opacity of visible emissions shall not equal or exceed 20 percent.

e. For each of the following: G-10 Grinder, 5009 and G-10 Classifier 5010 (G10.04), G-10 Ground Silicon Bin, 5006 (G10.05), G-10 Ground Silicon Bin, 5007 (G10.06):
   i. Pursuant to Regulation 401 KAR 59:010, Section 3(2), emissions of particulate matter shall not exceed 21.55 lb/hr.
   ii. Pursuant to Regulation 401 KAR 59:010, Section 3(1), the opacity of visible emissions shall not equal or exceed 20 percent.

f. For G10.03, G10.04, G10.05, and G10.06, see also **(23) Group Requirement 2 - Previous Synthetic Minors (PM_{10})**.

Compliance Demonstration Method:

a. a. Hourly Mass Emission Rate = [Hourly air (or nitrogen) flowrate. through baghouse] x [Manufacturer-guaranteed grain loading]

b. b. Opacity Limit - During all periods of operation or malfunction of the baghouses, the permittee shall maintain the records required by Item e. under **5.(Specific**

Recordkeeping Requirements below).

SECTION B - EMISSION POINTS, AFFECTED FACILITIES, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS

(20) G-2 AND G-10 PROCESS AREAS: (Continued)

3. Testing Requirements:

Pursuant to Regulations 401 KAR 59:005, Section 2(2) and 401 KAR 50:045, Section 1, performance testing using the Reference Methods specified in Regulation 401 KAR 50:015 shall be conducted as required by the Division.

4. Specific Monitoring Requirements:

a. The permittee shall install, calibrate, maintain, and operate according to manufacturer's specification a monitoring device for the continuous measurement of the differential static pressure across each baghouse.
b. The permittee shall monitor the hourly flowrate. (cfh) of air (or nitrogen) through each baghouse when the baghouse is in operation.

5. Specific Recordkeeping Requirements:

The permittee shall maintain records of the following information:

a. Design and/or manufacturer specifications for each baghouse including manufacturer/vendor guaranteed outlet grain loading (gr/scf).
b. The operational procedures and preventive maintenance records for each baghouses.
c. Continuous records of the pressure drop across each baghouse during all periods of operation.
d. Hourly records of the flowrate. (cfh) of air (or nitrogen) through each baghouse during all periods of operation.
e. During all periods of operation or malfunction of any of the baghouses, a daily (calendar day) log of the following information shall be kept:
    i. Whether any air emissions were visible from the hopper(s) associated with the baghouse(s) of concern.
    ii. Whether the visible emissions were normal for the process.

    If abnormal visible emissions are observed, the permittee shall record the following information:

    iii. The color of the emissions and whether the emissions were light or heavy.
    iv. The cause of the abnormal visible emissions.
    v. Any corrective actions taken.

6. Specific Reporting Requirements: None

7. Specific Control Equipment Operating Conditions: None

8. Alternate Operating Scenarios: None

SECTION B - EMISSION POINTS, AFFECTED FACILITIES, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS

(21) WASTEWATER TREATMENT PROCESS:

-- (W.01) 815 Sump Vent
-- (W.02) 824A/824B FSU Units
-- (W.04) 925/926 Equalization Tanks
-- (W.23) 824C FSU Units Collection Tank
-- (W.05) 937 Air Stripper Vent

APPLICABLE REGULATIONS:

a. Regulation 401 KAR 63:070 (40 CFR 63 Subpart D) applies to the emissions of Methyl Chloride from the 815 Sump Vent.
b. Regulation 401 KAR 63:070 (40 CFR 63 Subpart D) applies to the emissions of Methyl Chloride, Methylene Chloride, Biphenyl, Toluene and Trichloroethylene from the FSU Units, Equalization Tanks, the FSU Unit Collection Tank and the Air Stripper.

1. Operating Limitations: Emissions of hazardous air pollutants (HAPs) shall comply with the Early Reductions Limits.

2. Emission Limitations:

Emissions of hazardous air pollutants shall comply with the Early Reductions Limits.

Compliance Demonstration Methods:

a. The permittee shall take wastewater samples daily and analyze for Methyl Chloride, Methylene Chloride, Biphenyl, Toluene, and 1,1,1-Trichloroethylene concentrations.
b. Hourly mass flowrates shall be determined by using flowmeters at all inlet streams and the outlet of the 925/926 Equalization Tanks.
c. Hourly HAP emission shall be calculated by multiplying the difference between the most recent inlet and outlet HAP concentrations by the daily flow rates.
d. Monthly HAP emissions shall be calculated by summing the daily HAP emissions.
e. For (W.01), the above procedures shall be followed only when the B2.03 scrubber is operational.

3. Testing Requirements:

Wastewater HAP concentration measurements shall be performed using U.S. EPA or standard equivalent methods. Within six months of the issuance of this permit, the permittee shall submit a testing and QA/QC protocol to Division for Technical Services for review of the wastewater testing methodology. The Division of Technical Services may request additional information, split samples, certifications, etc. as required to determine appropriate testing methods.

4. Specific Monitoring Requirements:

a. Wastewater HAP concentrations shall be determined on a daily basis.
b. Wastewater flowrate. shall be determined on an hourly average basis.
c. For (W.01), the above shall be followed only when the B2.03 scrubber is operational.

SECTION B - EMISSION POINTS, AFFECTED FACILITIES, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS

(21) WASTEWATER TREATMENT PROCESS: (Continued)

5. Specific Recordkeeping Requirements:

The permittee shall maintain up-to-date, readily accessible records of the following information:

a. Date and time of measurements.
b. Wastewater HAP concentration recorded on the LIMS or PI system.
c. Hourly wastewater mass flow data.
d. Periods of monitor downtime and the reason(s) for the downtime.
e. Corrections made in data prior to reporting and the reason(s) for the corrections.

6. Specific Reporting Requirements:

a. HAP emissions shall be reported as described in **Section B (26) Group Requirement 4 - Early Reductions Requirements**.
b. VOC emissions shall be reported as described in **Section B (23) Group Requirement 1 - Previous Synthetic Minors (VOC)**.

7. Specific Control Equipment Operating Conditions: None

8. Alternate Operating Scenarios: None

SECTION B - EMISSION POINTS, AFFECTED FACILITIES, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS

(22) WASTEWATER QUENCH AND FILTER PRESS PROCESSES:

-- (W.07) 866 By-Product Metal Quench Box
-- (W.08) 974 By-Product Metal Quench Tank
90-01 (W.09) Existing 883 DPR Quench Vessel
99 (W.10) DPR Quench Basin
-- (W.13) 951/952 HP Units
-- (W.19) By-Product Metal Quench Basin
-- (W.22) 1012 By-Product Metal Quench Tank
90-2,3 (W.24) New 883 DPR Quench Vessel

APPLICABLE REGULATIONS:
401 KAR 63:002, incorporating by reference 40 CFR 63 Subpart D, "Regulations Governing Compliance Extensions for Early Reductions of Hazardous Air Pollutants", applies to emissions of:

a. Methyl Chloride from Emission Points W.07, W.08, and W.22
b. Methyl Chloride and Methyl Ethyl Ketone from Emission Points DPR Vessel (W.09), HP Units (W.13) and By-Product Metal Quench Basin (W.19), and W.24
c. Chloroform, Methyl Chloride, and Methyl Ethyl Ketone from the DPR Quench Basin (W.10).

1. Operating Limitations: None

2. Emission Limitations:

a. Emissions of hazardous air pollutants from each of the affected facilities listed above shall comply with the Early Reductions Limits in **Section B (26) Group Requirement 4 - Early Reductions Requirements**.
b. Emissions of volatile organic compounds (VOC) from Emission Point W.07 (866 By-Product Metal Quench Box) shall not exceed 6 tons per year (V-99-050, Netting emissions reduction requirements).
c. Total emissions of volatile organic compounds (VOC) from Emission Points W.09 (883 DPR Quench Vessel) and W.24 (New 883 DPR Quench Vessel) shall not exceed 5 tons per year (V-99-050, Netting emissions reduction requirements).

Compliance Demonstration Method:

a. For W.07, emissions of Methyl Chloride and VOC shall be calculated as follows:
   i. The permittee shall take and analyze samples of vent gas and analyze for Methyl Chloride and VOC once monthly.
   ii. The permittee shall supply valid engineering estimates of volume flow rate during batch operation.
   iii. Batch HAP and VOC emissions shall be calculated by multiplying the most recent HAP and VOC concentrations respectively by the batch displacement volume.
   iv. Monthly HAP and VOC emissions shall be calculated by summing the batch HAP and VOC emissions respectively.

SECTION B - EMISSION POINTS, AFFECTED FACILITIES, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS

(22) WASTEWATER QUENCH AND FILTER PRESS PROCESSES: (Continued)

b. For W.08 and W.22, emissions of Methyl Chloride shall be calculated as follows:
   i. The permittee shall take and analyze samples of vent gas and analyze for Methyl Chloride once monthly.
   ii. The permittee shall supply valid engineering estimates of volume flow rate during batch operation.
   iii. Batch HAP emissions shall be calculated by multiplying by the most recent HAP concentration by the batch displacement volume.
   iv. Monthly HAP emissions shall be calculated by summing the batch HAP emissions.

c. For W.09 and W.24 emissions of Methyl Chloride, Methyl Ethyl Ketone, and VOC shall be calculated as follows.
   i. The permittee shall take quarterly samples of vent gas and analyze for Methyl Chloride, Methyl Ethyl Ketone, and VOC.
   ii. The permittee shall supply valid engineering estimates of volume flow rate during batch operation.
   iii. Batch HAP and VOC emissions shall be calculated be multiplying by the most recent HAP and VOC concentrations respectively by the batch displacement volume.
   iv. Monthly HAP and VOC emissions shall be calculated by summing the batch HAP and VOC emissions respectively.

d. For W.10:
   i. When 5900 material is not sent to 954 tank, emissions of Chloroform, Methyl Chloride, and Methyl Ethyl Ketone shall be based on historical sampling and historical flowrates.
   ii. When 5900 material is sent to Tank 954, emissions of Chloroform, Methyl Chloride, and Methyl Ethyl Ketone shall be calculated as follows:
   HAP = Quantity of quenched DPR for test period x (HAP concentration when first discharged into the basin – HAP concentration after 60 days)

e. For W.13, and W.19, emissions of Methyl Chloride, Methyl Ethyl Ketone shall be based on historical sampling and historical flowrates.

3. Testing Requirements: None

4. Specific Monitoring Requirements:

a. The permittee shall take samples of vent gas and analyze for pollutant concentration as specified in the Emission Limitations Compliance Demonstration Methods above.
b. The permittee shall supply valid engineering estimates of volume flow rates as specified in the Emission Limitations Compliance Demonstration Methods above.
c. When 5900 materials are sent to Tank 954, analyze DPR gels using time lapse VOC analysis once a year.

REGULATIONS, AND OPERATING CONDITIONS

(22) WASTEWATER QUENCH AND FILTER PRESS PROCESSES: (Continued)

5. Specific Recordkeeping Requirements:

The permittee shall maintain up-to-date, readily accessible records of the following information:

a. For W.07, W.08, W.09, W.22, and W.24:
   i. The number of batches processed.
   ii. The batch displacement volume.
   iii. The HAP concentration.
   iv. The VOC concentration.
b. For W.10:
   i. When 5900 material is not sent to 954 tank, records of the most recent flow rate and concentrations.
   ii. When 5900 materials are sent to 954, maintain W.10 time lapse samples used to determine emissions.
c. For W.13 and W.19, records of the most recent flow rate and concentrations.

6. Specific Reporting Requirements:

a. HAP emissions shall be reported as described in **Section B (26) Group Requirement 4 - Early Reductions Requirements**.
b. VOC emissions shall be reported as described in **Section B (23) Group Requirement 1 - Previous Synthetic Minors (VOC)**.

7. Specific Control Equipment Operating Conditions:

When 5900 material is sent to Tank 954 and processed through the 883 DPR Quench Vessel, emissions from the DPR Quench Vessel shall be routed to the Vent Header System and control devices .

8. Alternate Operating Scenarios: None

SECTION B - EMISSION POINTS, AFFECTED FACILITIES, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS

(23) GROUP REQUIREMENT 1 - PREVIOUS SYNTHETIC MINORS (VOC):

This section covers those groups of emission points that were permitted in the past as 'synthetic minors' for volatile organic compounds (VOC), i.e., with emission limits to preclude the applicability of Regulation 401 KAR 51:017, "Prevention of significant deterioration of air quality".

The following synthetic minor permits were issued for the Carrollton plant:

a. Permit C-88-068 issued April 28, 1988 covered the Namex expansion and the following emission points:

--	(A10.08)	Two 40,000 Gallon Primary Reactors, Distillation Column and Secondary Recovery
--	(A10.01)	Syltherm Boiler
--	(C10.01)	Hydrolysis Loop, 750 gal Reactor, Distillation Column, and a Compressor
--	(D10.01)	Two 33,000 Gallon MeCl Recovery Reactors, Distillation Column and MEVA Column
--	(R10.01)	By-Product Reactor
82	(T10.01)	Thermal Oxidizer (T-10)
--	(--)	Namex Process Equipment Leaks

b. Permit C-89-015 issued March 6, 1989 covered the Namex wastewater expansion and the following emission points:

--	(W.01)	815 Sump Vent
--	(W.02)	824A/824B FS Units
--	(W.03)	Tank 923
--	(W.04)	925/926 Equalization Tanks
--	(W.23)	824C FSU Units Collection Tank
--	(W.05)	937 Air Stripper Vent
--	(W.09)	883 DPR Quench Vessel

c. Permit C-91-155 issued covered the Methylchlorodisilane (MCDS) Project and the following emission points:

--	(--)	Feed Product Interchanger (3744)
--	(--)	Distillation Column (3740)
--	(--)	Bottoms Accumulator(3745)
--	(--)	New Pipeline Equipment: - 30 Valves - 65 Flanges
--	(B1.04)	B-1 MCDS Dowtherm A Condenser

SECTION B - EMISSION POINTS, AFFECTED FACILITIES, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS

(23) GROUP REQUIREMENT 1 - PREVIOUS SYNTHETIC MINORS (VOC):
(Continued)
With this permit action, the individual synthetic minor limits in the three permits listed above have been rescinded since the permittee has demonstrated that the net significant emission change for these projects over the 10 year contemporaneous period from 1997 to 1988 is less than 40 tons per year of volatile organic compounds (VOC).

Additionally, this permit contains an overall emissions cap for volatile organic compounds. This emission cap covers all VOC emission points that the permittee is currently permitted to operate. In considering the net significant emission change for this facility, the emission points listed in the table below were considered. The overall emissions cap applies to these points and process equipment which vents to these points but is not otherwise listed only and not to future sources of VOC that the permittee may construct/operate.

Dow ID	Emission Unit Description	Page(s)/ (Early Reductions Source?)	Individual VOC Emission/Operational Limit?*
A1.01	Hot Oil Furnace	11	No
A1.05	Dowtherm A Vent Condenser	82, 87 (Yes)	No
A1.07	Dowtherm G Vent Condenser	94	No
A2.01	Hot Oil Furnace	11	No
A2.05	Dowtherm A Vent Condenser	82, 87 (Yes)	No
A2.06	Secondary Recovery	30, 43, 76, 82 (Yes)	Yes
A10.01	Syltherm Furnace	11, 71	No
A10.08	Secondary Recovery Absorber	30, 47, 71, 82 (Yes)	No
-	A-1 Comp Room	Removed from service	No
-	A-2 Absorber	Removed from service	No
-	Pilot Scrubber	Removed from service	No
B1.01	Impurities Reactor - 1236	82, 89 (Yes)	No
B1.02	Impurities Reactor - 1237	82, 89 (Yes)	No
B1.03	Impurities Reactor - 1289	82, 89 (Yes)	No
B1.04	Dowtherm A Vent Condenser	71, 82, 87 (Yes)	No
B2.03	Tank Farm Vent Scrubber	28, 82 (Yes)	No
B10.03	Impurities Reactor	82, 89 (Yes)	No

Dow ID	Emission Unit Description	Page(s)/ (Early Reductions Source?)	Individual VOC Emission/Operational Limit?*
C2.01	Process Venturi	52, 82 (Yes)	No
C2.05	Dowtherm G Vent Condenser	96	No
C2.06	1547 Silicone Tank	93	No
C2.08	DTG Vaporizer Furnace	94	No
C2.09	1543 Fresh Heptane Tank	14, 19, 82 (Yes)	No
C2.10	1542 Spent Heptane Tank	14, 19, 82 (Yes)	No
C3.01	Process Venturi	52, 82 (Yes)	No
C3.04	3214 Process Tank	93, 96	No
C3.05	3260 Process Tank	93, 96	No
C10.01	Process Venturi	52, 71, 82 (Yes)	No
C10.06	5918 Silicone Tank	93	No
C10.07	5919 Silicone Tank	93	No
D1.01	D-1 MEVA Column	22, 56, 76, 83 (Yes)	Yes
D1.03	Methanol Storage Tank	19, 83 (Yes)	No
D1.04	Methanol Storage Tank	19, 83 (Yes)	No
D1.05	Waste Acid Tank	19, 83 (Yes)	No
-	Old Waste Acid Tank		No
D10.01	D-10 MEVA Column	30, 58, 71, 83 (Yes)	No
D10.03	Methanol Storage Tank	17, 19, 83 (Yes)	No
D10.04	Cooling Tower	83, 88 (Yes)	No
F2.01	F-2 Process Vent	61, 83 (Yes)	No
F2.27	Storage Tank 1548	93	No
F4.01	Process Tank 2005	62, 83 (Yes)	No
F4.02	Process Tank 2007 B&C	62, 83 (Yes)	No
F5.01	F-5 Reactor Vent	61, 83 (Yes)	No
F5.02	F-5 Process Vent	61, 83 (Yes)	No
F6.01	F-6 Process Vent	61, 83 (Yes)	No
F9.01	F-9 Process Vent	93, 97	No
F9.03	Silicone Tank 1538	94	No

Dow ID	Emission Unit Description	Page(s)/ (Early Reductions Source?)	Individual VOC Emission/Operational Limit?*
F9.05	Silicone Tank 1537	94	No
F9.09	Silicone Tank 2705 B	94	No
F15.01	Process Tank 2460	62, 83 (Yes)	No
F15.02	Process Tank 2462	62, 83 (Yes)	No
F15.03	Process Tank 2463	62, 83 (Yes)	No
F15.05	Process Tank 2457	94	No
F15.06	Process Tank 2458	19, 83 (Yes)	No
F15.07	Organics Tank 2007A	94	No
F17.01	F-17 Process Vent	62, 83 (Yes)	No
FIN.01	Finishing DTA Furnace	94	No
FIN.03	Dowtherm A Vent Condenser	83, 87 (Yes)	No
GAS.01	Unleaded Gas Storage	19, 83 (Yes)	No
GAS.02	Diesel Fuel No.2 Storage	19, 83 (Yes)	No
HW.01	Waste Loading Site #1	83, 92 (Yes)	No
HW.02	Waste Loading Site #2	83, 92 (Yes)	No
HW.03	Waste Loading Site #3	83, 92 (Yes)	No
L1.02	Process Tank 2407	94	No
L1.03	Process Tank 2410	94	No
L2.01	L-2 Syltherm Furnace	94	No
L2.02	L-2 Process Tank	61, 83 (Yes)	No
P10.01	P-10 Pressure Swing Adsorber	22, 24, 28, 83, 111 (Yes)	No
P10.03	WWTP Quenching	83, 90 (Yes)	No
S10.01	S-10 Splitter System Vent	94, 97	No
S10.03	Silicone Tank 5916	94	No
T10.01	T-10 Thermal Oxidizer	22,24,28,71,79,84 (Yes)	No
U.01	703 Boiler	3	No
U.02	766 Boiler	3	No
U.03	657 Boiler	3	No
U.04	600 Boiler	3	No

Dow ID	Emission Unit Description	Page(s)/ (Early Reductions Source?)	Individual VOC Emission/Operational Limit?*
U.05	601 Boiler	3	No
U.06	785 Fuel Oil #2 Tank	14, 19, 84 (Yes)	No
U.07	3100 Fuel Oil #6 Tank	19, 84 (Yes)	No
U.08	790 Fuel Oil #6 Tank	19, 84 (Yes)	No
U.11	767 Boiler	3, 111	No
W.01	WWTP 815 Sump	66, 71, 84 (Yes)	No
-	WWTP 4301 Sump		No
W.02	FSU Units 824	66, 71, 84 (Yes)	No
W.03	Waste Fluid Tank 923	19, 71, 84 (Yes)	No
W.04	Equalization Tanks 925/926	66, 71, 84 (Yes)	No
W.05	937 Air Stripper	66, 71, 84 (Yes)	No
-	Pilot Air Stripper		No
W.07	866 By-Product Metal Quencher	68, 76, 84 (Yes)	Yes
-	Intermittent Vents		No
W.08	974 By-Product Metal Quencher	68, 84 (Yes)	No
W.09	Old 883 DPR Quench vent to atmosphere	68, 71, 76, 84 (Yes)	Yes
W.10	DPR Quench Ponds	68, 84 (Yes)	No
W.13	Hydroxide Precipitators	68, 84 (Yes)	No
W.17	P1-1003 Seal Fluid Vent	97	No
W.18	Process Tank 1002	97	No
W.19	By-Product Metal Basins	68, 84 (Yes)	No
W.21	940/941 Aquafloc Tanks	94	No
W.22	1012 By-Product Quencher	68, 84 (Yes)	No
W.23	824C Process Tank	66, 71, 84 (Yes)	No
W.24	New 883 DPR Quench vent to atmosphere.	68, 84 (Yes)	No
A-FUG	A Process Fugitives	38	No
B-FUG	B Process Fugitives	38	No
C-FUG	C Process Fugitives	38	No
D-FUG	D Process Fugitives	33	No

Dow ID	Emission Unit Description	Page(s)/ (Early Reductions Source?)	Individual VOC Emission/Operational Limit?*
P-FUG	P Process Fugitives	38	No
T-FUG	T Process Fugitives	38	No
DOCK-FUG	Methanol Unloading Fugitives	33	No

SECTION B - EMISSION POINTS, AFFECTED FACILITIES, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS

(23) GROUP REQUIREMENT 1 - PREVIOUS SYNTHETIC MINORS (VOC): (Continued)

*Individual VOC Emission/Operational Limit - "Yes" indicates an emission point that has an individual operational or VOC emission limits to enforce reductions credited during the netting process. For these limits, see individual emission point listings in Section B.

1. Operating Limitations: None

2. Emission Limitations:

a. Emissions of volatile organic compounds from the Carrollton plant shall not exceed 145 tons during any consecutive 12-month period. This emission limit applies only to those VOC emission sources currently existing at the Carrollton plant. These emission sources, which include process equipment which vent to these emission sources but are not otherwise listed, are listed in the table above. This emission limit shall not apply to new VOC emission sources constructed and operated after the issuance of this permit.

b. The synthetic minor emission limits specified in permits C-88-068, C-89-015, and C-91-155 are no longer applicable to the Carrollton plant. The permittee is no longer required to comply with the individual 40 tpy emission caps for VOC specified in these 3 permits.

c. The following emission points are also subject to individual emission/operational limits to ensure that the reductions applied during the netting process are state- and federally-enforceable - A2.06, D1.01, W.07, W.09. For these individual emission/operational limits, please see the individual emission point subsections in **Section B**.

Compliance Demonstration Method:

a. The permittee shall calculate and maintain records of volatile organic compound emissions from each source of VOC emissions listed above on a monthly basis.

b. The permittee shall maintain records of VOC emissions from the VOC sources listed above for all consecutive 12-month periods.

c. The compliance demonstration methodology for the individual emission/operational limits can be found under individual emission point subsections in **Section B**.

3. Testing Requirements:

Testing for the purpose of collecting actual VOC emissions data shall be similar to the Early Reductions requirements. Emissions data shall consist of documented results from source tests using an EPA Reference Method, EPA Conditional Method, or the owner's or operator's source test method which has been validated pursuant to Method 301 of 40 CFR 63, Appendix A. However, if one of the following conditions exists, an owner or operator may submit, in lieu of results from source tests, calculations based on engineering principles, emission factors, or material balance data as actual emission data for VOC emission reporting purposes:

SECTION B - EMISSION POINTS, AFFECTED FACILITIES, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS

(23) GROUP REQUIREMENT 1 - PREVIOUS SYNTHETIC MINORS (VOC): (Continued)

3. Testing Requirements: (continued)

(1) No applicable EPA Reference Method, EPA Conditional Method, or other source test method exists;
(2) It is not technologically or economically feasible to perform source tests;
(3) It can be demonstrated to the satisfaction of the Division that the calculations will provide emission estimates of accuracy comparable to that of any applicable source test method;
(4) For base year emission estimates only, the base year conditions no longer exist at an emission point at the Carrollton plant and emission data could not be produced for such an emission point, by performing source tests under currently existing conditions and converting the test results to reflect base year conditions, that is more accurate than an estimate produced by using engineering principles, emission factors, or a material balance; or
(5) The emissions from one or a set of emission points at the Carrollton plant are small compared to total source emissions and potential errors in establishing emissions from such points will not have a significant effect on the accuracy of total emissions established for the source.

Twelve months prior to the renewal of this permit, the permittee shall submit a review of all VOC emission points to determine what testing will need to be performed before permit renewal.

4. Specific Monitoring Requirements:
See previous sections for individual Emission Points requirements.

5. Specific Recordkeeping Requirements:
a. Each VOC emission unit shall be uniquely identified with a tag, label or other markings consistent with the emission unit description or emission unit identification number. Emission point identification systems implemented for the purposes of Early Reductions will satisfy this requirement.
b. The permittee shall keep records of calculations used to determine VOC emissions. The permittee shall retain all monitoring data and records, including supporting emissions calculations, for a period of 5 years from the date of monitoring, measurement, report, or application. All monitoring equipment shall be installed, calibrated, and maintained according to the manufacturer's specifications.
c. In addition to monitoring emissions during normal operation, all periods of equipment malfunction shall be monitored. Records indicating the date and duration of each equipment malfunction shall be maintained.

SECTION B - EMISSION POINTS, AFFECTED FACILITIES, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS

(23) GROUP REQUIREMENT 1 - PREVIOUS SYNTHETIC MINORS (VOC): (Continued)

6. Specific Reporting Requirement:

a. Total VOC emissions from the Carrollton plant shall be submitted semiannually with the reports required in General Condition F.5. in SECTION F.. The report shall include emissions for each VOC emission source listed in the table above. The first report shall be submitted on or before the 31st of the month following the end of the calendar half in which the permit is issued. The first report shall also include a complete set of **all** emission calculations. The complete set of calculations are not required to be submitted with subsequent reports, but the permittee shall include any changes in emission factors, control efficiencies or method of calculation.

b. All emissions resulting from equipment malfunctions shall also be reported. Malfunctions shall be identified, the cause of the malfunction, and what actions that the permittee undertook to minimize the emissions. The permittee shall continue to be responsible for meeting all requirements of 401 KAR 50:055 during periods of malfunction.

Emissions during periods of a malfunction shall be determined based on what they would have been had that malfunction not occurred. During periods when monitoring data is missing or unavailable, the permittee shall report emissions from continuous processes as (1) equivalent to the third-highest daily average recorded during the relevant semi-annual reporting period **or** (2) submit alternate emissions calculations with justification. For batch processes, the average emission rate may be used to estimate emissions.

7. Specific Control Equipment Operating Conditions:

See individual emission point subsections in **Section B.**

8. Alternate Operating Scenarios: None

SECTION B - EMISSION POINTS, AFFECTED FACILITIES, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS

(24) GROUP REQUIREMENT 2 - PREVIOUS SYNTHETIC MINORS (PM_{10}):

This section covers those groups of emission points that were permitting in the past as 'synthetic minors' for particulate matter (PM_{10}), i.e., with emission limits to preclude the applicability of Regulation 401 KAR 51:017, "Prevention of significant deterioration of air quality".

APPLICABLE REGULATIONS:

Permit C-88-068 issued April 28, 1988 covering the NAMEX expansion and including the following particulate emission sources:

--	(A10.02)	A-10 Silicon/Sand Hoppers (5110, 5115) Both hoppers vented through a single baghouse (5112)
--	(A10.03)	A-10 Copper Hopper (5120) Vented through bagfilter (5122)
--	(A10.04)	A-10 Catalyst Hoppers (5118) Vented through bagfilter (5119)
--	(A10.05)	A-10 Silicon/Sand Hoppers: (5210, 5215) Both hoppers vented through a single baghouse (5212)
--	(A10.06)	A-10 Copper Hoppers (5220) Vent through bagfilter (5122)
--	(A10.07)	A-10 Catalyst Hoppers (5218) Vented through bagfilter (5219)
--	(G10.01)	G-10 Vacuum Pump (5024) Vented through bagfilter
--	(G10.03)	G-10 Sand Bin, (5028) Vented through a bagfilter (5029)
--	(G10.04)	G-10 Grinder (5009) and G-10 Classifier (5010): Vented through cyclone (5011) and baghouse (5019)
--	(G10.05)	G-10 Ground Silicon Bin, 5006: Vented through bagfilter (5033)
--	(G10.06)	G-10 Ground Silicon Bin, 5007: Vented through bagfilter (5034)
82	(T10.01)	Vent Header System T-10 Thermal Oxidizer

SECTION B - EMISSION POINTS, AFFECTED FACILITIES, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS

(24) GROUP REQUIREMENT 2 - PREVIOUS SYNTHETIC MINORS (PM_{10}): (Continued)

1. Operating Limitations: N/A

2. Emission Limitations:

Combined emissions of particulate matter (PM_{10}) from the affected facilities listed above shall not exceed 15 tons during any consecutive 12-month period to preclude applicability of PSD.

Compliance Demonstration Method:

a. The permittee shall maintain monthly records of particulate matter (PM_{10}) emissions from each of the affected facilities listed above to demonstrate that emissions will be less than the significant emission rates specified in Regulation 401 KAR 51:017, Prevention of Significant Deterioration.

b. For all affected facilities listed above, except T10.01, monthly emissions from each of the affected facilities above shall be calculated according to the following equation:

Monthly Mass Emission Rate =[Monthly air (or nitrogen) flowrate through baghouse] x [Manufacturer-guaranteed grain loading]

c. For T10.01, monthly emissions shall be calculated based on the latest performance test particulate emissions results according to the following equation.

Monthly Mass Emission Rate = [IWS-on KyEIS Emission factor x hours of operation with IWS operating] + [IWS-off KyEIS Emission factor x hours of operation without IWS operating]

3. Testing Requirements:

The permittee shall conduct performance testing of the T-10 thermal oxidizer in accordance with (d) Construction, Startup, and Initial Compliance Demonstration Requirements in **Section G – General Conditions** while the IWS is operating and while the IWS is not operating to establish the T10.01 particulate emission factors.

4. Specific Monitoring Requirements:

a. For all affected facilities listed above, except T10.01, the permittee shall monitor the hourly flowrate (cfh) of air (or nitrogen) through each baghouse when the baghouse is in operation.

b. For T10.01, the permittee shall monitor whether the IWS is operating or not using hourly-average voltage data.

5. Specific Recordkeeping Requirements:

The permittee shall maintain records of the following information:

a. Design and/or manufacturer's specifications for each baghouse including manufacturer/vendor guaranteed outlet grain loading (gr/scf).

b. Monthly records of PM_{10} emissions from each of the affected facilities listed above.

c. For T10.01:

i. The particulate emission results from the latest performance test.

ii. Hourly average IWS voltage data.

SECTION B - EMISSION POINTS, AFFECTED FACILITIES, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS

(24) GROUP REQUIREMENT 2 - PREVIOUS SYNTHETIC MINORS (PM_{10}): (Continued)

5. Specific Recordkeeping Requirements: (continued)

iii. Hours per month that Vent Header System is operating that the IWS is operating

iv. Hours per month that Vent Header System is operating that the IWS is not operating

6. Specific Reporting Requirement:

Monthly PM_{10} emissions shall be submitted semiannually with the reports required in General Condition F.5. in SECTION F.

7. Specific Control Equipment Operating Conditions: None

8. Alternate Operating Scenarios: None

SECTION B - EMISSION POINTS, AFFECTED FACILITIES, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS (CONTINUED)

(25) GROUP REQUIREMENT 3 - STATE AIR TOXICS:

These requirements cover those affected facilities that installed control technology or took voluntary limitations to avoid a BACT determination pursuant to 401 KAR 63:022 or a RACT determination pursuant to 401 KAR 63:021.

-- (W.14) Six (6) Filter Presses
One (1) Bagfilter
F-1007
Conveyor #1 - 999
Lump Breaker - 1000
Blower - B-1006

-- (W.15) Spent Bed Filter Press Storage Area:
Bucket Elevator - 1008
Conveyor #2 -1001
Conveyor #3 - 1009

1. Operating Limitations(State Origin only):

The material storage pile shall be enclosed on three sides up to a height of 12 feet and shall be roofed pursuant to 401 KAR 63:022 and 401 KAR 63:010, Fugitive emissions

2. Emission Limitations(State Origin only):

The source-wide emission rate of copper shall not exceed the Threshold Ambient Limit (TAL) for copper listed in 401 KAR 63:022.

3. Testing Requirements(State Origin only):

An analysis of the spent bed material shall be performed yearly to determine copper content.

4. Specific Monitoring Requirements: None

5. Specific Recordkeeping Requirements:

a. The permittee shall maintain readily accessible records of the amount of solids handled and the copper concentration of the spent filter press material.
b. The permittee shall maintain appropriate calculations to insure that the TAL is not exceeded.

6. Specific Reporting Requirements: None

7. Specific Control Equipment Operating Conditions: None

8. Alternate Operating Scenarios: None

SECTION B - EMISSION POINTS, AFFECTED FACILITIES, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS

(26) GROUP REQUIREMENT 4 - EARLY REDUCTIONS REQUIREMENTS:

Pursuant to 40 CFR 63.73, the Early Reduction Source is all HAP emission points located within the contiguous plant boundaries of Dow Corning Corporation at 4770 US Highway 42, Carrollton, Kentucky. The source includes all HAP point sources and some area sources within the waste water treatment process. Boilers and equipment leaks are not included in the Early Reduction Source. All Early Reduction emission points at the time of issuance of this permit, which include process equipment which vent to these emission sources but are not otherwise listed, are listed below:

Dow ID	Emission Unit Description	Page(s)	De Minimis Source ?
A1.05	Dowtherm A Vent Condenser	72, 87	Yes
A2.05	Dowtherm A Vent Condenser	72, 87	Yes
A2.06	A-2 Secondary Recovery	30, 43, 72, 76	No
A10.08	A-10 Secondary Recovery	30, 47, 71, 72	No
B1.01	1236 Impurities Reactor	72, 89	Yes
B1.02	1237 Impurities Reactor	72, 89	Yes
B1.03	1289 Impurities Reactor	72, 89	Yes
B1.04	B-1 MCDS Dowtherm A Condenser	71, 72, 87	Yes
B2.01	B-2/B-3 CCR Scrubber	49	Yes
B2.03	B-2 Vent Scrubber	28, 72	Yes
B10.01	B-10 CCR Scrubber	50	No
B10.03	B-10 Impurities Reactors	72, 89	Yes
B20.01	B-20 CCR Scrubber (6493)	51	No
B20.03	B-20 Impurities Reactors	89	Yes
C2.01	C-2 Process Venturi	52, 72	Yes
C2.02	C-2 Process Absorber	54	No
C2.03	C-2 Rearranger Venturi	52	Yes
C2.09	Fresh Heptane Tank 1543	14, 19, 73	Yes
C2.10	Spent Heptane Tank 1542	14, 19, 73	Yes
C3.01	C-3 Process Venturi	52, 73	Yes
C3.02	C-3 Process Absorber	54	No
C3.03	Rearranger Venturi	52	No
C10.01	C-10 Process Venturi	52, 71, 73	No

Dow ID	Emission Unit Description	Page(s)	De Minimis Source ?
C10.02	C-10 Process Absorber	54	No
C10.05	Acid Pit Vent	90	Yes
D1.01	D-1 MEVA Column	22, 56, 73, 76	No
D1.03	Methanol Tank 1520	19, 73	Yes
D1.04	Methanol Tank 1536	19, 73	Yes
D1.05	Waste Acid Tank 1483	19, 73	Yes
D1.06	D-1 Area Cooling Tower	88	Yes
D10.01	D-10 MEVA Column	30, 58, 71, 73	No
D10.03	Methanol Tank 5915	17, 19, 73	Yes
D10.04	D-10 Area Cooling Tower	73, 88	Yes
DPR.02	HCl Scrubber 1148 (DPR Reactor 1141)	91	Yes
F2.01	F-2 Process Vent	61, 73	No
F4.01	2005 Process Tank	62, 73	Yes
F4.02	2007 Process Tank	62, 73	Yes
F5.01	F-5 Reactor Vent	61, 73	No
F5.02	F-5 Process Vent	61, 73	No
F6.01	F-6 Process Vent	61, 73	No
F15.01	2460 Process Tank	62, 74	Yes
F15.02	2462 Process Tank	62, 74	Yes
F15.03	2463 Process Tank	62, 74	Yes
F15.06	Ethylene Glycol Tank 2458	19, 74	Yes
F17.01	F-17 Process Tank	62, 74	Yes
FIN.03	Finishing Dowtherm A Vent Condenser	74, 87	Yes
GAS.01	Unleaded Gasoline Tank EQ009	19, 74	Yes
GAS.02	Diesel Fuel Tank EQ010	19, 74	Yes
HW.01	Waste Loading from Tanks 5537 & 5772	74, 92	Yes
HW.02	Waste Loading from Tanks 923	74, 92	Yes
HW.03	Waste Loading from Tanks 1542	74, 92	Yes
L2.02	L-2 Process Vent	61, 74	No
P10.01	P-10 Adsorption System	22, 24, 28, 74, 111	No

Dow ID	Emission Unit Description	Page(s)	De Minimis Source ?
P10.03	Adsorbent Quenching	74, 90	Yes
R10.01	R-10 Rearranger Scrubber	60, 71	No
T10.01	T-10 Thermal Oxidizer Unit	22, 24, 28, 71, 74, 79	No
U.06	Fuel Oil #2 Tank 785	14, 19, 74	Yes
U.07	Fuel Oil #6 Tank 3100	19, 74	Yes
U.08	Fuel Oil #6 Tank 790	19, 75	Yes
U.10	20% HCl Storage Tank	19	Yes
W.01	815 Sump Vent	66, 71, 75	Yes
W.02	824A/824B FSU's	66, 71, 75	No
W.03	923 Waste Storage Tank	19, 71, 75	Yes
W.04	925/926 Equalization Tanks	66, 71, 75	No
W.05	937 Air Stripper Vent	66, 71, 75	No
W.07	866 By-product Metal Quench Box	68, 75, 76	No
W.08	974 By-product Metal Quench Tank	68, 75	No
W.09	883 DPR Quench Vessel	68, 71, 75, 76	No
W.10	DPR Quench Basin	68, 75	Yes
W.13	951/952 HP Units	68, 75	Yes
W.19	By-product Metal Quench Basin	68, 75	Yes
W.22	By-product Metal Quench Tank 1012	68, 75	No
W.23	824C FSU Collection Tank	66, 71, 75	No
W.24	New DPR Quench 883 Vessel	68, 75	No

APPLICABLE REGULATIONS:

In accordance with section 112(i)(5) of the Clean Air Act and 40 CFR 63, Subpart D, "Regulations Governing Compliance Extensions for Early Reductions of Hazardous Air Pollutants" (incorporated by reference in 401 KAR 63:002), this permit grants each emission unit in the Early Reductions Source a 6-year extension from the compliance date of the otherwise applicable standard promulgated under section 112d of the Clean Air Act. In lieu of complying with applicable section 112(d) standards, the permittee accepts the following Alternative Emission Limitations, monitoring, record keeping, emission calculations, and reporting requirements for the Early Reductions Source.

The Alternative Emission Limitations shall be effective until six years after the compliance date for the last promulgated standard under section 112(d) of the Clean Air Act that is applicable to any emission unit in the Early Reductions Source. The Alternate Emission Limitations shall expire six years after the last applicable compliance date for all emission units in the existing source which shall comply with the standard promulgated under section 112(d) of the Clean Air Act.

SECTION B - EMISSION POINTS, AFFECTED FACILITIES, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS

(26) GROUP REQUIREMENT 4 - EARLY REDUCTIONS REQUIREMENTS: (Continued)

1. Operating Limitations: None

2. Emission Limitations:

Pursuant to 40 CFR 63.73, the permittee has defined their Early Reduction Source as the entire existing facility except for Boilers, Indirect Heat Exchangers, and Pipeline Equipment. As an emission limit, the permittee has accepted the following limitation:

30.3 Megagrams/ year of Total Gaseous Hazardous Air Pollutants

30.3 Megagrams/ year of Weighted Gaseous Hazardous Air Pollutants

Compliance with the Alternative Emission Limitations shall be determined on a calendar year basis.

3. Testing Requirements:

In addition to any previously listed Specific Testing Requirements, pursuant to 40 CFR 63.74(g), Baseline Post-Reduction estimates shall be based on:

The best available data representing actual emissions for the purpose of establishing base year or post-reduction emissions under this section shall consist of documented results from source tests using an EPA Reference Method, EPA Conditional Method, or the owner's or operator's source test method which has been validated pursuant to Method 301 of 40 CFR 63, Appendix A. However, if one of the following conditions exists, an owner or operator may submit, in lieu of results from source tests, calculations based on engineering principles, emission factors, or material balance data as actual emission data for establishing base year or post-reduction emissions:

(1) No applicable EPA Reference Method, EPA Conditional Method, or other source test method exists;

(2) It is not technologically or economically feasible to perform source tests;

(3) It can be demonstrated to the satisfaction of the Division that the calculations will provide emission estimates of accuracy comparable to that of any applicable source test method;

(4) For base year emission estimates only, the base year conditions no longer exist at an emission point in the source and emission data could not be produced for such an emission point, by performing source tests under currently existing conditions and converting the test results to reflect base year conditions, that is more accurate than an estimate produced by using engineering principles, emission factors, or a material balance; or

(5) The emissions from one or a set of emission points in the source are small compared to total source emissions and potential errors in establishing emissions from such points will not have a significant effect on the accuracy of total emissions established for the source.

Twelve months prior to the renewal of this permit, the permittee shall submit a review of all HAP emission points to determine what testing will need to be performed before permit renewal.

REGULATIONS, AND OPERATING CONDITIONS

(26) GROUP REQUIREMENT 4 - EARLY REDUCTIONS REQUIREMENTS: (Continued)

4. Specific Monitoring Requirements:

See previous subsections for individual Emission Points requirements.

5. Specific Recordkeeping Requirements:

a. Each emission unit included in the Early Reductions Source shall be uniquely identified with a tag, label or other markings consistent with the emission unit description or emission unit identification number.

b. The permittee shall keep records of calculations, used to determine HAP and weighted HAP emissions. The permittee shall retain all monitoring data and records, including supporting emissions calculations, for a period of 5 years from the date of monitoring, measurement, report, or application. All monitoring equipment shall be installed, calibrated, and maintained according to the manufacturer's specifications.

c. In addition to monitoring emissions during normal operation, all periods of equipment malfunction shall be monitored. Records indicating the date and duration of each equipment malfunction shall be maintained.

6. Specific Reporting Requirements:

a. Total HAP emissions from the Early Reductions Source shall be submitted semiannually with the reports required in General Condition F.5. in SECTION F. The report shall include emissions for each emission unit identified in the Source. The first report shall be submitted on or before the 31st of the month following the end of the calendar half in which the permit is issued. The first report shall also include a complete set of **all** emission calculations. The complete set of calculations are not required to be submitted with subsequent reports, but the permittee shall include any changes in emission factors, control efficiencies or method of calculation. These reports shall include complete calculations for any new de minimis source that began operation during the reporting period. A de minimis source is one that has the potential to emit less than uncontrolled ten (10) percent and controlled emissions less than one (1) percent of the source wide threshold.

b. All emissions resulting from equipment malfunctions shall also be reported. Malfunctions shall be identified, the cause of the malfunction, and what actions that the permittee undertook to minimize the emissions. The permittee shall continue to be responsible for meeting all requirements of 401 KAR 50:055 during periods of malfunction.

Emissions during periods of a malfunction shall be determined based on what they would have been had that malfunction not occurred. During periods when monitoring data is missing or unavailable, the permittee shall report emissions from continuous processes as (1) equivalent to the third-highest daily average recorded during the relevant semi-annual reporting period **or** (2) submit alternate emissions calculations with justification. For batch processes, the average emission rate may be used to estimate emissions.

7. Specific Control Equipment Operating Conditions:

See individual emission point subsections in **Section B**.

8. Alternate Operating Scenarios: None

SECTION B - EMISSION POINTS, AFFECTED FACILITIES, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS (CONTINUED)

(26) GROUP REQUIREMENT 4 - EARLY REDUCTIONS REQUIREMENTS:

De minimis Emission Early Reductions Sources

The following Affected Facilities would be otherwise considered insignificant emission sources, except they are part of the Early Reduction Source and shall comply with the Alternative Emission Limitations, Recordkeeping and Reporting.

EIS	Dow ID	Description
--	(A1.05)	A-1 Dowtherm A Vent Condenser (# 1164)
--	(A2.05)	A-2 Dowtherm A Vent Condenser (# 3518)
--	(B1.04)	B-1 MCDS Dowtherm A Condenser
--	(FIN.03)	Finishing Dowtherm A Vent Condenser (# 2159)

APPLICABLE REGULATION:
Regulation 401 KAR 63:070 (40 CFR 63 Subpart D) applies to the emissions of Biphenyl.

1. Compliance Demonstration Method:
Mass Balance.

2. Specific Recordkeeping Requirements:
a. The permittee shall record the number of periods of venting and volume of the Dowtherm condensers.
b. The permittee shall maintain a readily accessible MSDS for the Dowtherm fluid.

3. Alternate Operating Scenarios:
The permittee may use any heat transfer fluid. The permittee shall report a change in material in its Early Reduction reports.

SECTION B - EMISSION POINTS, AFFECTED FACILITIES, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS (CONTINUED)

(26) GROUP REQUIREMENT 4 - EARLY REDUCTIONS REQUIREMENTS:

De minimis Emission Early Reductions Sources (Continued)

-- (D1.06) D-1 Area Cooling Tower (15 gallons of anti-fouling/scaling chemical is injected into the cooling water once per week. Deerborn 865 is 25% Ethylene Glycol)

-- (D10.04) D-10 Area Cooling Tower (15 gallons of anti-fouling/scaling chemical is injected into the cooling water once per week. Deerborn 865 is 25% Ethylene Glycol)

APPLICABLE REGULATION:
Regulation 401 KAR 63:070 (40 CFR 63 Subpart D) applies to the emissions of Ethylene Glycol.

1. Compliance Demonstration Method:
Mass Balance

2. Specific Recordkeeping Requirements:
a. The permittee shall record the amounts of anti-fouling/scaling chemical added to the cooling water system.
b. The permittee shall maintain a readily accessible MSDS for cooling water additives.

3. Alternate Operating Scenarios:
The permittee may use any non-chromium cooling water additive. The permittee shall report a change in material in its Early Reduction reports.

SECTION B - EMISSION POINTS, AFFECTED FACILITIES, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS (CONTINUED)

(26) GROUP REQUIREMENT 4 - EARLY REDUCTIONS REQUIREMENTS:

De minimis Emission Early Reductions Sources (Continued)

EIS	Dow ID	Description	
--	(B1.01)	B-1 Impurities Reactor 1236	(Emissions during purging)
--	(B1.02)	B-1 Impurities Reactor 1237	(Emissions during purging)
--	(B1.03)	B-1 Impurities Reactor 1289	(Emissions during purging)
--	(B10.03)	B-10 Impurities Reactors (5370, 5380)	(Emissions during purging)
--	(B20.03)	B-20 Impurities Reactors (6470, 6480)	(Emissions during purging)

APPLICABLE REGULATIONS:
Regulation 401 KAR 63:070 (40 CFR 63 Subpart D) applies to the emissions of Hydrogen Chloride from each of the reactors listed above during maintenance.

1. Compliance Demonstration Method:
The permittee shall demonstrate compliance by a mass balance across each of the reactors listed above.

2. Specific Recordkeeping Requirements:
The permittee shall keep records of the number of reactor changeouts.

SECTION B - EMISSION POINTS, AFFECTED FACILITIES, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS (CONTINUED)

(26) GROUP REQUIREMENT 4 - EARLY REDUCTIONS REQUIREMENTS:

De minimis Emission Early Reductions Sources (Continued)

-- (P10.03) Adsorbent Quenching

-- (C10.05) Covered Acid Pit:
Vent with Blower (5576)

APPLICABLE REGULATIONS:

a. Regulation 401 KAR 63:070 (40 CFR 63 Subpart D) applies to the emissions of Hydrogen Chloride from the adsorber (P10.03) above during maintenance.
b. Regulation 401 KAR 63:070 (40 CFR 63 Subpart D) applies to the emissions of Hydrogen Chloride from the Acid Pit Vent (C10.05).

1. Compliance Demonstration Method:

a. For P10.03 Absorbent Quenching, compliance shall be demonstrated by mass balance.
b. For C10.05 Acid Pit Vent, compliance shall be demonstrated by mass balance and estimated partial pressure.

2. Specific Recordkeeping Requirements:

a. For P10.03 Absorbent Quenching, the permittee shall keep a record of the amount of absorbent quenched.
b. For C10.05 Acid Pit Vent, the permittee shall keep records of the following information:
   i. Rated vent capacity.
   ii. Acid concentration.

SECTION B - EMISSION POINTS, AFFECTED FACILITIES, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS (CONTINUED)

(26) GROUP REQUIREMENT 4 - EARLY REDUCTIONS REQUIREMENTS:

De minimis Emission Early Reductions Sources (Continued)

-- (DPR.02) DPR Reactor #1141 with HCl Scrubber #1148

APPLICABLE REGULATIONS:
Regulation 401 KAR 63:070 (40 CFR 63 Subpart D) applies to the emissions of Hydrogen Chloride.

1. Operating Limitations:
Emission of hazardous air pollutants (HAPs) shall comply with the Early Reduction Limits.

Compliance Demonstration Method:
Mass balance and scrubber control efficiency.

2. Emission Limitations:
Emissions of hazardous air pollutants shall comply with the Early Reductions Limits.

3. Specific Monitoring Requirements:
The permittee shall monitor the scrubbing liquid flowrate through the scrubber.

4. Specific Recordkeeping Requirements:
The permittee shall maintain up-to-date, readily accessible records of the following information: Scrubbing liquid flowrate through the scrubber.

5. Specific Reporting Requirements:
Emissions shall be reported as described in the Early Reductions section.

REGULATIONS, AND OPERATING CONDITIONS (CONTINUED)

(26) GROUP REQUIREMENT 4 - EARLY REDUCTIONS REQUIREMENTS:

De minimis Emission Early Reductions Sources (Continued)

-- (HW.01) Waste Loading from Tanks 5537 & 5772
-- (HW.02) Waste Loading from Tanks 923
-- (HW.03) Waste Loading from Tanks 1542

APPLICABLE REGULATIONS:
Regulation 401 KAR 63:070 (40 CFR 63 Subpart D) applies to the emissions of n-hexane and methyl chloride from the 5537 and 5772 tanks waste loading operations.
Regulation 401 KAR 63:070 (40 CFR 63 Subpart D) applies to the emissions of toluene from the 923 tank waste loading operations.
Regulation 401 KAR 63:070 (40 CFR 63 Subpart D) applies to the emissions of n-hexane and methyl chloride from the 1542 tank waste loading operations.

1. Compliance Demonstration Method:
Emissions from the waste loading operations shall be calculated by mass balance.

2. Specific Recordkeeping Requirements:
The permittee shall maintain records of the amount and composition of the waste loading onto tanks 5537, 5772, 923, and 1542 tanks.

SECTION C - INSIGNIFICANT ACTIVITIES

The following listed activities have been determined to be insignificant activities for this source pursuant to Regulation 401 KAR 50:035, Section 5(4). While these activities are designated as insignificant the permittee must comply with the applicable regulation(s) and some minimal level of periodic monitoring may be necessary.

1. Storage Tanks - The following tanks qualify as insignificant activities and are exempt from 40 CFR 60 Subpart Kb (incorporated by reference in 401 KAR 60:005) for one or more of the following reasons:
   a. They are not used to store any volatile organic liquids (VOLs) as defined in 40 CFR 60.11b (k);
   b. Have a capacity less than 40 cubic meters [40 CFR 60.110b (a) & (b)];
   c. Were constructed prior to July 23, 1984 and have never been reconstructed or modified since that date [40 CFR 60.110b (a)].

Dow Vent ID	Tank ID	Dow Vent ID	Tank ID	Dow Vent ID	Tank ID
A10.09	5130	A10.09	5230	A10.09	5251
C3.04	3214	C3.05	3260	C2.06	1547
C10.03	5544	C10.06	5917	C10.07	5918
D-1 MEVA	1487	D-10 MEVA	5914	D1.02	1488
D10.02	5913	F1.01	2064	F1.02	2054
F1A.01	2189	F1.03	1521	F1.04	2714C
F1A.01	2189	F1A.02	2714A	F2.02	4015
F2.03	2019	F2.04	2056	F2.05	2210
F2.06	2211	F2.07	2212	F2.08	2213
F2.09	2214	F2.10	2215	F2.11	2216
F2.12	2219	F2.13	2220	F2.14	2221
F2.15	2222	F2.16	2223	F2.17	2225
F2.18	2229	F2.19	2242	F2.20	2243
F2.21	2705A	F2.22	2701A	F2.23	4166
F2.24	2278	F2.25	2035	F2.26	2016
F2.27	1548				
F4.03	4000	F4.04	4001	F4.05	2705C
F4.06	2070	F5.03	2088	F5.04	2332
F5.05	2328	F5.06	2329	F5.07	2082

Dow Vent ID	Tank ID	Dow Vent ID	Tank ID	Dow Vent ID	Tank ID
F9.01	2367	F9.01	2368	F9.01	2377
F9.01	2387	F9.02	2227	F9.03	1538
F9.04	1539	F9.05	1537	F9.06	2700A
F9.07	2701B	F9.08	2700C	F9.09	2705B
F9.10	2700B	F9.12	2714B	F9.13	2703A
F14.01	4140	F14.02	2703B	F15.04	2456
F15.05	2457	F15.07	2007A	F16.01	4102
F18.01	4357B				
L1.01	2405	L1.02	2407	L1.03	2410
L2.03	7090	L2.03	7083	S10.01	5807
S10.01	5809	S10.01	5814	S10.01	5815
S10.03	5916	S10.04	5919	W.12	888
W.21	940	W.21	941		

2. Furnaces:

(C2.08) Struthers-Wells, Corp., Model 6CV 15-6, C2-DTG Vaporizer
5.93 mmBTU/hr (Natural Gas fired only)
Applicable Regulation: 401 KAR 61:015

(FIN.01) 3201 Eclipse Vaporizer, 4000MVDOWZB-G-PRO, FIA Dowtherm Vaporizer
11.43 mmBTU/hr (Natural Gas fired only)
Applicable Regulation: 401 KAR 59:015

89 (L2.01) 2211 Horizontal Syltherm Heater
4.0 mmBTU/hr (Natural Gas fired only)
Applicable Regulation: 401 KAR 59:015

3. A-1 Process Area:

(A1.04 & A1.08) A-1 Catalyst Hoppers - 1082, 1087
Vented directly to the atmosphere
Applicable Regulation - 401 KAR 59:010

(A1.03 & A1.06) A-1 Copper Hopper - 1084, 1101
Must vent through bagfilters 1084F, 1101F to remain insignificant
Applicable Regulation - 401 KAR 59:010

A1.07) Dowtherm G Vent Condenser
Applicable Regulation - None

SECTION C - INSIGNIFICANT ACTIVITIES (CONTINUED)

4. A-2 Process Area:

(A2.03) A-2 Copper Hopper - 3508
Must vent through bagfilter 3508 to remain insignificant
Applicable Regulation - 401 KAR 59:010

(A2.04) A-2 Catalyst Hopper: 3516
Vented directly to the atmosphere
Applicable Regulation - 401 KAR 59:010

5. A-10 Process Area:

(A10.04 & A10.07) A-10 Catalyst Hoppers: 5118, 5218
Must vent through bagfilters 5119, 5219 to remain insignificant
Applicable Regulation - 401 KAR 59:010

(A10.03 & A10.06) A-10 Copper Hoppers: 5120, 5220
Must vent through bagfilters 5122, 5222 to remain insignificant
Applicable Regulation - 401 KAR 59:010

6. B-2/B-3 Process Area:

(B2.02) B-2/B-3 Vac-U-Max Loader (5394)
Must vent through two filters in series to remain insignificant
Applicable Regulation - 401 KAR 59:010

7. B-10 Process Area:

(B10.02) B-10 CCR Vac-U-Max Loader (5394)
Must vent through two filters in series to remain insignificant
Applicable Regulation - 401 KAR 59:010

(B10.06) B-10 Me CCR Vac-U-Max Loader
Must vent through two filters in series to remain insignificant
Applicable Regulation - 401 KAR 59:010

8. B-20 Process Area:

(B20.02) B-20 CCR Vac-U-Max Loader (5394)
Must vent through two filters in series to remain insignificant
Applicable Regulation - 401 KAR 59:010

9. R-10 Process Area:

(R10.02) R-10 Rearranger Vac-U-Max Loader (5286)
Must vent through two filters in series to remain insignificant

Applicable Regulation - 401 KAR 59:010

SECTION C - INSIGNIFICANT ACTIVITIES (CONTINUED)

10. C-2 Process Area:

(C2.04)	C-2 Rearranger Vac-U-Max Loader (5394) Must vent through two filters in series to remain insignificant Applicable Regulation - 401 KAR 59:010
(C2.05)	Dowtherm G Vent Condenser Applicable Regulation - None

11. C-3 Process Area:

(C3.04)	3214 Process Vessel, 2700 gallons Applicable Regulation - None
(C3.05)	3260 Process Vessel, 3000 gallons Applicable Regulation - None

12. C-10 Process Area:

(C10.09)	C-10 Rearranger Vac-U-Max Loader Must vent through two filters in series to remain insignificant Applicable Regulation - 401 KAR 59:010

13. Finishing Area:

(FIN.02)	Finishing Dust Collection System Baghouse (2122): Must vent through baghouse to remain insignificant Applicable Regulation - 401 KAR 59:010

14. L-1 Process Area:

(L1.04)	009-2211 MIS Dust Collector Building 2211 Vibrating Screen Filter must vent through dust collector to remain insignificant Applicable Regulation - 401 KAR 59:010

15. G-2 and G-10 Process Areas:

(G2.01)	G-2 Vacuum Pump, 3344 Must vent through Bagfilter 3345 to remain insignificant Applicable Regulation - 401 KAR 59:010
(G2.02)	G-2 Silicon Lump Bin (3305): Must vent through Bagfilter (FLT1-3305) to remain insignificant. Applicable Regulation - None
(G2.03)	G-2 Silicon Lump Bin (3306): Must vented through Bagfilter (FLT1-3306) to remain insignificant. Applicable Regulation - 401 KAR 59:010
(G10.01)	G-10 Vacuum Pump, 5024 Must vent through Bagfilter 5024 to remain insignificant

Applicable Regulation - 401 KAR 59:010

SECTION C - INSIGNIFICANT ACTIVITIES (CONTINUED)

15. G-2 and G-10 Process Areas: (Continued)
    (G10.02) G-10 Silicon Lump Bins (5003, 5004)
    Must vented through Bagfilter (5031) to remain insignificant
    Applicable Regulation - 401 KAR 59:010

16. Miscellaneous Sources:
    (SHOP.01) Olcott Parts Washer (Model GOC 3860): 15 HP Pump
    Roof Ventilator
    Applicable Regulation - None

17. S-10 and F-9 Process Areas:
    (S10.01) S-10 Splitter System Vent: Equipped with Condenser 5826
    Applicable Regulation - None
    (S10.02) S-10 Materials Loader:
    Vented through Filter Unit 5844
    Applicable Regulation - 40 KAR 59:010
    (F9.01) F-9 Splitter System Vent: Equipped with Condenser 2386
    Applicable Regulation - None

18. P-10 Process Area:
    (P10.02) P-10 Adsorbent Loading and Unloading:
    Vented through Filter Unit
    Applicable Regulation - 40 KAR 59:010

19. Wastewater Treatment Process:
    (W.06) 934 Limestone Contactor Vent
    Must vent through Bagfilter 934 to remain insignificant
    Applicable Regulation - 401 KAR 59:010

20. Wastewater Quench and Filter Press Processes:
    (W.06) Limestone Contactor Vent:
    Vented through bagfilter
    Applicable Regulation 401 KAR 59:010

    (W.11) 802 Lime Silo:
    Vented through bagfilter
    Applicable Regulation - 401 KAR 59:010

    (W.17) P1-1003 Vacuum Pump: Seal Oil Evaporation
    Applicable Regulation - None

    (W.18) 1002 Process Tank, 1000 gallons: Hydraulic Solvent Storage
    Applicable Regulation - None

(W.20) 869 Lime Slaker Roof Vent
Applicable Regulation - 401 KAR 59:010

SECTION C - INSIGNIFICANT ACTIVITIES (CONTINUED)

21. Miscellaneous:

(--) Pressurized Storage Vessels containing volatile organic liquids designed to operate in excess of 204.9 kPa with no emissions to the ambient air
Applicable Regulation - None

(--) Natural Draft Cooling Towers not regulated by NESHAP or Early Reductions and associated chemical storage tanks
Applicable Regulation - 401 KAR 63:010

(--) Non-Vapor Balanced Silicone Fluids Loading Operations
Applicable Regulation - None

(--) Solids Settling Basins (Waste Treatment)
Applicable Regulation - 401 KAR 63:010

(--) Emergency Generators & Emergency Fire Water Diesel Pumps
Applicable Regulation - 401 KAR 59:015

(--) Fugitive Dust from roadways, landfill and high traffic areas within the plant
Applicable Regulation - 401 KAR 63:010

(--) R & D Laboratory Hoods
Applicable Regulation - None

(--) QA and Analytical Laboratory Hoods
Applicable Regulation - None

(--) Vessels storing lubricating oils, hydraulic oils, machining fluids and machining oils
Applicable Regulation - None

(--) Combustion source flame safety purging on startup
Applicable Regulation - None

(--) Heat exchanger equipment steam cleaning area
Applicable Regulation - None

(--) Operations using aqueous solutions containing less than 1% volatile organic compounds excluding HAPs and not subject to Early Reductions
Applicable Regulation - None

(--) Replacement and repair of bags and filters in air filtration equipment
Applicable Regulation - 401 KAR 63:010

SECTION C - INSIGNIFICANT ACTIVITIES (CONTINUED)

21. Miscellaneous: (Continued)

(--) Activities associated with the collection/disposal of spilled materials and residues and not subject to Early Reductions
Applicable Regulation - None

(--) Degreasing operations that do not exceed 145 gallons per year and cold cleaners that are not subject to Early Reductions
Applicable Regulation - None

(--) Equipment in support of manufacturing activities that do not result in HAP emissions such as brazing, soldering, welding, cutting equipment
Applicable Regulation - None

SECTION D - SOURCE EMISSION LIMITATIONS AND TESTING REQUIREMENTS

Not applicable.

SECTION E - CONTROL EQUIPMENT CONDITIONS

Pursuant to 401 KAR 50:055, Section 2(5), at all times, including periods of startup, shutdown and malfunction, owners and operators shall, to the extent practicable, maintain and operate any affected facility including associated air pollution control equipment in a manner consistent with good air pollution control practice for minimizing emissions. Determination of whether acceptable operating and maintenance procedures are being used will be based on information available to the cabinet which may include, but is not limited to, monitoring results, opacity observations, review of operating and maintenance procedures, and inspection of the source.

SECTION F - MONITORING, RECORD KEEPING, AND REPORTING REQUIREMENTS

1. When continuing compliance is demonstrated by periodic testing or instrumental monitoring, the permittee shall compile records of required monitoring information that include:
   a. Date, place as defined in this permit, and time of sampling or measurements.
   b. Analyses performance dates;
   c. Company or entity that performed analyses;
   d. Analytical techniques or methods used;
   e. Analyses results; and
   f. Operating conditions during time of sampling or measurement;

2. Records of all required monitoring data and support information, including calibrations, maintenance records, and original strip chart recordings, and copies of all reports required by the Division for Air Quality, shall be retained by the permittee for a period of five years and shall be made available for inspection upon request by any duly authorized representative of the Division for Air Quality. [401 KAR 50:035, Permits, Section 7(1)(d)2 and 401 KAR 50:035, Permits, Section 7(2)(c)]

3. In accordance with the requirements of Regulation 401 KAR 50:035, Permits, Section 7(2)(c) the permittee shall allow the Cabinet or authorized representatives to perform the following:
   a. Enter upon the premises where a source is located or emissions-related activity is conducted, or where records are kept;
   b. Have access to and copy, at reasonable times, any records required by the permit:
      i. During normal office hours, and
      ii. During periods of emergency when prompt access to records is essential to proper assessment by the Cabinet;
   c. Inspect, at reasonable times, any facilities, equipment (including monitoring and pollution control equipment), practices, or operations required by the permit. Reasonable times shall include, but are not limited to the following:
      i. During all hours of operation at the source,
      ii. For all sources operated intermittently, during all hours of operation at the source and the hours between 8:00 a.m. and 4:30 p.m., Monday through Friday, excluding holidays, and
      iii. During an emergency; and
   d. Sample or monitor, at reasonable times, substances or parameters to assure compliance with the permit or any applicable requirements. Reasonable times shall include, but are not limited to the following:
      i. During all hours of operation at the source,
      ii. For all sources operated intermittently, during all hours of operation at the source and the hours between 8:00 a.m. and 4:30 p.m., Monday through Friday, excluding holidays, and
      iii. During an emergency.

4. No person shall obstruct, hamper, or interfere with any Cabinet employee or authorized representative while in the process of carrying out official duties. Refusal of entry or access may constitute grounds for permit revocation and assessment of civil penalties.

SECTION F - MONITORING, RECORD KEEPING, AND REPORTING REQUIREMENTS (CONTINUED)

5. Reports of any monitoring required by this permit, other than continuous emission or opacity monitors, shall be reported to the division's Florence Regional Office no later than the six-month anniversary date of this permit and every six months thereafter during the life of this permit, unless otherwise stated in this permit. The permittee may shift to semi-annual reporting on a calendar year basis upon approval of the regional office. If calendar year reporting is approved, the semi-annual reports are due February 28th and August 31st of each year. Data from the continuous emission and opacity monitors shall be reported to the Technical Services Branch in accordance with the requirements of Regulation 401 KAR 59:005, General Provisions, Section 3(3). All reports shall be certified by a responsible official pursuant to Section 6(1) of Regulation 401 KAR 50:035, Permits. All deviations (i.e., excursions[(1)], exceedences[(2)], and deviations from specific Operating Limitations) from permit requirements shall be clearly identified in the reports.

   The reports shall contain a summary of the following information:

   a. For each emission point for which specific monitoring (periodic or continuous) is required by this permit, whether the required monitoring was performed for the entire 6-month period covered by the report (Yes/No).
      For any periods during which the required monitoring was not performed, the report shall contain the following additional information:
      i. Duration of each incident.
      ii. The cause of the incident and any corrective action(s) taken.
   b. For each control device, whether any excursions (as defined in this permit) were recorded during the 6-month period covered by the report (Yes/No).
      If any excursions were recorded, the report shall contain the following information:
      i. Duration of the incident.
      ii. The cause of the incident and any corrective action(s) taken.
      iii. Whether the excursion resulted in the exceedence of an emissions standard.
   c. For each emission point and for each pollutant with a specific allowable emission limit, whether there were any exceedence(s) of an allowable emission limit (Yes/No).
      For each recorded exceedence, the report shall contain the following additional information:
      i. Duration of the incident.
      ii. The cause of the incident and any corrective action(s) taken.
   d. For each emission point with a specific operating limitation, whether there were any periods of deviation from the specified operating limitation (Yes/No).
      For each deviation, the report shall contain the following additional information:
      i. Duration of the deviation.
      ii. The cause of the deviation and any corrective action(s) taken.

   [(1)]An "excursion" is defined as any period (taking into account the appropriate averaging time) during which a control device operates outside the range specified by this permit.
   [(2)]An "exceedence" is defined as any period (taking into account the appropriate averaging time) during which the actual emission rate from any emission point exceeds the allowable emission limit specified in this permit for that emission point.

SECTION F - MONITORING, RECORD KEEPING, AND REPORTING REQUIREMENTS (CONTINUED)

6. a. In accordance with the provisions of Regulation 401 KAR 50:055, Section 1 the owner or operator shall notify the Division for Air Quality's Florence Regional Office concerning startups, shutdowns, or malfunctions as follows:
   1. When emissions during any planned shutdowns and ensuing startups will exceed the standards notification shall be made no later than three (3) days before the planned shutdown, or immediately following the decision to shut down, if the shutdown is due to events which could not have been foreseen three (3) days before the shutdown.
   2. When emissions due to malfunctions, unplanned shutdowns and ensuing startups are or may be in excess of the standards notification shall be made as promptly as possible by telephone (or other electronic media) and shall cause written notice upon request.

   b. In accordance with the provisions of Regulation 401 KAR 50:035, Section 7(1)(e)2, the owner or operator shall report emission-related exceedances from permit requirements including those attributed to upset conditions (other than emission exceedances covered by general condition 6 a. above) to the Division for Air Quality's Florence Regional Office within 30 days. Other deviations from permit requirements shall be included in the semi-annual report required by General Condition F.5.

7. Pursuant to Regulation 401 KAR 50:035, Permits, Section 7(2)(b), the permittee shall certify compliance with the terms and conditions contained in this permit, annually on the permit issuance anniversary date by completing and returning a Compliance Certification Form (DEP 7007CC) (or an approved alternative) to the Division for Air Quality's Florence Regional Office and the U.S. EPA in accordance with the following requirements:
   a. Identification of each term or condition of the permit that is the basis of the certification;
   b. The compliance status regarding each term or condition of the permit;
   c. Whether compliance was continuous or intermittent; and
   d. The method used for determining the compliance status for the source, currently and over the reporting period, pursuant to 401 KAR 50:035, Section 7(1)(c),(d), and (e).
   e. The certification shall be postmarked by August 31st of each year. Annual compliance certifications should be mailed to the following addresses:

      i. Division for Air Quality
      Florence Regional Office
      8020 Ewing Boulevard, Suite 110
      Florence, KY 41042-6657

      ii. U.S. EPA Region IV
      Air Enforcement Branch
      Atlanta Federal Center
      61 Forsyth St.
      Atlanta, GA 30303-8960

      iii. Division for Air Quality
      Central Files
      803 Schenkel Lane
      Frankfort, KY 40601

SECTION F - MONITORING, RECORD KEEPING, AND REPORTING REQUIREMENTS (CONTINUED)

8. In accordance with Regulation 401 KAR 50:035, Section 23, the permittee shall provide the division with all information necessary to determine its subject emissions within thirty (30) days of the date the KEIS emission report is mailed to the permittee.

9. Pursuant to Section VII.3 of the policy manual of the Division for Air Quality as referenced by Regulation 401 KAR 50:016, Section 1(1), results of performance test(s) required by the permit shall be submitted to the division by the source or its representative within forty-five days after the completion of the fieldwork.

10. For the purposes of this permit, in accordance with the provisions of Regulation 40 CFR 63 Subpart A, a continuous recording device is defined as one that capable of recording a minimum of one data sample every 15 minutes. Data from continuous recording devices unless otherwise specified in the relevant standard, shall be reduced to 1-hour averages computed from four or more data points equally spaced over each 1-hour period, except during periods when calibration, quality assurance, or maintenance activities are being performed.

SECTION G - GENERAL CONDITIONS

(a) General Compliance Requirements

1. The permittee shall comply with all conditions of this permit. A noncompliance shall be (a) violation(s) of state regulation 401 KAR 50:035, Permits, Section 7(3)(d) and for federally enforceable permits is also a violation of Federal Statute 42 USC 7401 through 7671q (the Clean Air Act) and is grounds for enforcement action including but not limited to the termination, revocation and reissuance, or revision of this permit.

2. The filing of a request by the permittee for any permit revision, revocation, reissuance, or termination, or of a notification of a planned change or anticipated noncompliance, shall not stay any permit condition.

3. This permit may be revised, revoked, reopened and reissued, or terminated for cause. The permit will be reopened for cause and revised accordingly under the following circumstances:
   a. If additional applicable requirements become applicable to the source and the remaining permit term is three (3) years or longer. In this case, the reopening shall be completed no later than eighteen (18) months after promulgation of the applicable requirement. A reopening shall not be required if compliance with the applicable requirement is not required until after the date on which the permit is due to expire, unless this permit or any of its terms and conditions have been extended pursuant to Regulation 401 KAR 50:035, Section 12(2)(c);
   b. The Cabinet or the U. S. EPA determines that the permit must be revised or revoked to assure compliance with the applicable requirements;
   c. The Cabinet or the U. S. EPA determines that the permit contains a material mistake or that inaccurate statements were made in establishing the emissions standards or other terms or conditions of the permit;

   Proceedings to reopen and reissue a permit shall follow the same procedures as apply to initial permit issuance and shall affect only those parts of the permit for which cause to reopen exists. Reopenings shall be made as expeditiously as practicable. Reopenings shall not be initiated before a notice of intent to reopen is provided to the source by the division, at least thirty (30) days in advance of the date the permit is to be reopened, except that the division may provide a shorter time period in the case of an emergency.

4. The permittee shall furnish to the division, in writing, information that the division may request to determine whether cause exists for modifying, revoking and reissuing, or terminating the permit, or to determine compliance with the permit. [401 KAR 50:035, Permits, Section 7(2)(b)3e and 401 KAR 50:035, Permits, Section 7(3)(j)]

5. The permittee, upon becoming aware that any relevant facts were omitted or incorrect information was submitted in the permit application, shall promptly submit such supplementary facts or corrected information to the permitting authority.

SECTION G - GENERAL CONDITIONS (CONTINUED)

6. Any condition or portion of this permit which becomes suspended or is ruled invalid as a result of any legal or other action shall not invalidate any other portion or condition of this permit. [401 KAR 50:035, Permits, Section 7(3)(k)]

7. The permittee shall not use as a defense in an enforcement action the contention that it would have been necessary to halt or reduce the permitted activity in order to maintain compliance. [401 KAR 50:035, Permits, Section 7(3)(e)]

8. Except as identified as state-origin requirements in this permit, all terms and conditions contained herein shall be enforceable by the United States Environmental Protection Agency and citizens of the United States.

9. This permit shall be subject to suspension if the permittee fails to pay all emissions fees within 90 days after the date of notice as specified in 401 KAR 50:038, Section 3(6). [401 KAR 50:035, Permits, Section 7(3)(h)]

10. Nothing in this permit shall alter or affect the liability of the permittee for any violation of applicable requirements prior to or at the time of permit issuance. [401 KAR 50:035, Permits, Section 8(3)(b)]

11. This permit shall not convey property rights or exclusive privileges. [401 KAR 50:035, Permits, Section 7 (3)(g)]

12. Issuance of this permit does not relieve the permittee from the responsibility of obtaining any other permits, licenses, or approvals required by the Kentucky Cabinet for Natural Resources and Environmental Protection or any other federal, state, or local agency.

13. Nothing in this permit shall alter or affect the authority of U.S. EPA to obtain information pursuant to Federal Statute 42 USC 7414, Inspections, monitoring, and entry. [401 KAR 50:035 , Permits, Section 7(2)(b)5]

14. Nothing in this permit shall alter or affect the authority of U.S. EPA to impose emergency orders pursuant to Federal Statute 42 USC 7603, Emergency orders. [401 KAR 50:035, Permits, Section 8(3)(a)]

15. Permit Shield: Except as provided in State Regulation 401 KAR 50:035, Permits, compliance by the affected facilities listed herein with the conditions of this permit shall be deemed to be compliance with all applicable requirements identified in this permit as of the date of issuance of this permit.

16. All previously issued construction and operating permits are hereby subsumed into this permit.

SECTION G - GENERAL CONDITIONS (CONTINUED)

(b) Permit Expiration and Reapplication Requirements

1. This permit shall remain in effect for a fixed term of five (5) years following the original date of issue. Permit expiration shall terminate the source's right to operate unless a timely and complete renewal application has been submitted to the division at least six months prior to the expiration date of the permit. Upon a timely and complete submittal, the authorization to operate within the terms and conditions of this permit, including any permit shield, shall remain in effect beyond the expiration date, until the renewal permit is issued or denied by the division. [401 KAR 50:035, Permits, Section 12]
2. In accordance with section 112(i)(5) of the Clean Air Act and 40 CFR 63, Subpart D (Early Reductions Rule), this permit grants each emission unit in the Early Reductions Source a 6-year extension from the compliance date of the otherwise applicable standard promulgated under section 112d of the Clean Air Act. In lieu of complying with applicable section 112(d) standards, the permittee accepts Alternative Emission Limitations, monitoring, recordkeeping, emission calculations, and reporting requirements for the Early Reductions Source.

   The Alternative Emission Limitations shall be effective until six years after the compliance date for the last promulgated standard under section 112(d) of the Clean Air Act that is applicable to any emission unit in the Early Reductions Source. The Alternate Emission Limitations shall expire six years after the last applicable compliance date for all emission units in the existing source which shall comply with the standard promulgated under section 112(d) of the Clean Air Act.

   Six (6) months prior to expiration of the deferral of an otherwise applicable standard, the source is required to apply for a permit revision pursuant to the requirements of Regulation 401 KAR 50:035, Permits. The permit revision is only required for those affected facilities subject to a promulgated standard.

(c) Permit Revisions

1. A minor permit revision procedure may be used for permit revisions involving the use of economic incentive, marketable permit, emission trading, and other similar approaches, to the extent that these minor permit revision procedures are explicitly provided for in the SIP or in applicable requirements and meet the relevant requirements of Regulation 401 KAR 50:035, Section 15.

2. This permit is not transferable by the permittee. Future owners and operators shall obtain a new permit from the Division for Air Quality. The new permit may be processed as an administrative amendment if no other change in this permit is necessary, and provided that a written agreement containing a specific date for transfer of permit responsibility coverage and liability between the current and new permittee has been submitted to the permitting authority thirty (30) days in advance of the transfer.

SECTION G - GENERAL CONDITIONS (CONTINUED)

(d) Construction, Start-Up, and Initial Compliance Demonstration Requirements

1. Construction of process and/or air pollution control equipment authorized by this permit shall be conducted and completed only in compliance with the conditions of this permit.

2. Within thirty (30) days following commencement of construction, and within fifteen (15) days following start-up, and attainment of the maximum production rate specified in the permit application, or within fifteen (15) days following the issuance date of this permit, whichever is later, the permittee shall furnish to the Division for Air Quality's Florence Regional Office in writing, with a copy to the division's Frankfort Central Office, notification of the following:
    a. The date when construction commenced.
    b. The date of start-up of the affected facilities listed in this permit.
    c. The date when the maximum production rate specified in the permit application was achieved.

3. Pursuant to State Regulation 401 KAR 50:035, Permits, Section 13(1), unless construction is commenced on or before 18 months after the date of issue of this permit, or if construction is commenced and then stopped for any consecutive period of 18 months or more, or if construction is not completed within eighteen (18) months of the scheduled completion date, then the construction and operating authority granted by this permit for those affected facilities for which construction was not completed shall immediately become invalid. Extensions of the time periods specified herein may be granted by the division upon a satisfactory request showing that an extension is justified.

4. Operation of the affected facilities for which construction is authorized by this permit shall not commence until compliance with the applicable standards specified herein has been demonstrated pursuant to 401 KAR 50:055, except as provided in Section I of this permit.

5. This permit shall allow time for the initial start-up, operation, and compliance demonstration of the affected facilities listed herein. However, within sixty (60) days after achieving the maximum production rate at which the affected facilities will be operated but not later than 180 days after initial start-up of such facilities, the permittee shall conduct a performance test on the affected facilities in accordance with Regulation 401 KAR 50:055, General compliance requirements. These performance tests must also be conducted in accordance with General Conditions G(d)6 of this permit and the permittee must furnish to the Division for Air Quality's Frankfort Central Office a written report of the results of such performance test.

6. Pursuant to Section VII 2.(1) of the policy manual of the Division for Air Quality as referenced by Regulation 401 KAR 50:016, Section 1.(1), at least one month prior to the date of the required performance test, the permittee shall complete and return a Compliance Test Protocol (Form DEP 6027) to the division's Frankfort Central Office. Pursuant to 401 KAR 50:045, Section 5, the division shall be notified of the actual test date at least ten (10) days prior to the test.

SECTION G - GENERAL CONDITIONS (CONTINUED)

(e) Acid Rain Program Requirements

1. If an applicable requirement of Federal Statute 42 USC 7401 through 7671q (the Clean Air Act) is more stringent than an applicable requirement promulgated pursuant to Federal Statute 42 USC 7651 through 7651o (Title IV of the Act), both provisions shall apply, and both shall be state and federally enforceable.

(f) Emergency Provisions

1. An emergency shall constitute an affirmative defense to an action brought for noncompliance with the technology-based emission limitations if the permittee demonstrates through properly signed contemporaneous operating logs or other relevant evidence that:
   a. An emergency occurred and the permittee can identify the cause of the emergency;
   b. The permitted facility was at the time being properly operated;
   c. During an emergency, the permittee took all reasonable steps to minimize levels of emissions that exceeded the emissions standards or other requirements in the permit; and,
   d. The permittee notified the division as promptly as possible and submitted written notice of the emergency to the division within two working days after the time when emission limitations were exceeded due to the emergency. The notice shall meet the requirements of 401 KAR 50:035, Permits, Section 7(1)(e)2, and include a description of the emergency, steps taken to mitigate emissions, and the corrective actions taken. This requirement does not relieve the source of any other local, state or federal notification requirements.

2. Emergency conditions listed in General Condition (f)1 above are in addition to any emergency or upset provision(s) contained in an applicable requirement.

3. In an enforcement proceeding, the permittee seeking to establish the occurrence of an emergency shall have the burden of proof. [401 KAR 50:035, Permits, Section 9(3)]

(g) Risk Management Provisions

1. The permittee shall comply with all applicable requirements of 40 CFR Part 68, Risk Management Plan provisions. If required, the permittee shall comply with the Risk Management Program and submit a Risk Management Plan to:

   RMP Reporting Center
   P.O. Box 3346
   Merrifield, VA 22116-3346

2. The permittee shall submit additional relevant information if requested by the division or the U.S. EPA.

SECTION G - GENERAL CONDITIONS (CONTINUED)

(h) Ozone depleting substances

1. The permittee shall comply with the standards for recycling and emissions reduction pursuant to 40 CFR 82, Subpart F, except as provided for Motor Vehicle Air Conditioners (MVACs) in Subpart B:
   a. Persons opening appliances for maintenance, service, repair, or disposal shall comply with the required practices contained in 40 CFR 82.156.
   b. Equipment used during the maintenance, service, repair, or disposal of appliances shall comply with the standards for recycling and recovery equipment contained in 40 CFR 82.158.
   c. Persons performing maintenance, service, repair, or disposal of appliances shall be certified by an approved technician certification program pursuant to 40 CFR 82.161.
   d. Persons disposing of small appliances, MVACs, and MVAC-like appliances (as defined at 40 CFR 82.152) shall comply with the recordkeeping requirements pursuant to 40 CFR 82.166.
   e. Persons owning commercial or industrial process refrigeration equipment shall comply with the leak repair requirements pursuant to 40 CFR 82.156.
   f. Owners/operators of appliances normally containing 50 or more pounds of refrigerant shall keep records of refrigerant purchased and added to such appliances pursuant to 40 CFR 82.166.
2. If the permittee performs service on motor (fleet) vehicle air conditioners containing ozone-depleting substances, the source shall comply with all applicable requirements as specified in 40 CFR 82, Subpart B, Servicing of Motor Vehicle Air Conditioners.

SECTION H - ALTERNATE OPERATING SCENARIOS

Not applicable.

SECTION I - COMPLIANCE SCHEDULE

1. Emission Point U.11: For the 767 boiler:
   Within 60 days after achieving the maximum firing rate for fuel oil #2, the permittee shall conduct performance testing for particulate matter and visible emissions as required by Regulation 401 KAR 59:015, Section 8 (1).

   Emission Point P10.01: For the P-10 Pressure Swing Absorber:
   a. Within 30 days after the issuance of the final permit, the permittee, pursuant to 40 CFR 60.663(e) and 40 CFR 60.703(e) shall provide to the Administrator of the U.S. Environmental Protection Agency (EPA) information describing the operation of the P-10 Adsorber and the process parameter(s) which would indicate proper operation and maintenance of the device. The Administrator may request further information and will specify appropriate monitoring procedures or requirements.
   b. Within 180 days of approval of a monitoring plan by the Administrator, the permittee shall perform the following or equivalent performance test:
      i. Method 18, 25 or equivalent to determine the concentration of TOC in the Adsorber outlet and inlet.
      ii. Method 2, 2A, 2B, 2C or 2D, as appropriate to determine flowrate
   c. At least 30 days prior to the date of the required performance tests for the P-10 Adsorber, the permittee shall complete and return a Compliance Test Protocol (Form DEP6027) to the Division's Frankfort Central Office. The protocol form shall be used by the Division to determine if a pretest meeting is required. The Division shall be notified of the actual test date at least 10 days prior to the tests.

2. Compliance with the terms and conditions of this Section shall be certified annually on the permit anniversary date, to the Division for Air Quality and to the U. S. EPA when compliance has been achieved. The compliance certification shall include the following:
   a. The identification of the permit term or condition in this Section that is the basis of the certification;
   b. The compliance status;
   c. Whether compliance is continuous or intermittent; and,
   d. The method used for determining the compliance status, currently and over the reporting period pursuant to Regulation 50:035, Section 7(1)(c),(d), and (e).

SECTION J - NON-APPLICABLE REGULATIONS/REQUIREMENTS

As specified in 401 KAR 50:035, Section 8(1), compliance with the conditions of this permit shall be deemed compliance with applicable requirements that are included and are specifically identified in this permit, as of the date of permit issuance. Furthermore, pursuant to 401 KAR 50:035, Section 8(1)(b), the cabinet has determined that the requirements listed in this section are not applicable to the source. This section is not intended to exclude the source from exemption from other applicable requirements.

Pursuant to 401 KAR 50:035, Section 8(3), nothing in this permit shall alter or affect:

(a) 42 USC 7603 (emergency orders, Section 303 of the Act), including the authority of the U.S. EPA in that section;

(b) The liability of the owner or operator of a source for violation of applicable requirements prior to or at the time of permit issuance; or

(c) The ability of U.S. EPA to obtain information from the source pursuant to 42 USC 7414 (Section 114 of the Act).

a. New source performance standards:

1. Regulation 40 CFR 60 Subpart E, Standards of Performance for Incinerators - The provisions of this Subpart only apply to incinerators with a charging rate of more than 45 metric tons of solid waste per day. The permittee does not operate any such incinerators and is exempt from this standard.
2. Regulation 401 KAR 60:110 & 60:111 (40 CFR 60 Subpart K & Ka), Standards of Performance for Storage Vessels for Petroleum Liquids - Both these regulations apply only to petroleum liquid storage tanks that are greater than 40,000 gallons in capacity. Both the permittee's gasoline tanks are less than 40,000 gallons in capacity. Fuel Oils #2 and #6 are specifically exempt from the definition of petroleum liquids, so the fuel oil storage tanks are also exempt from these regulations.
3. Regulation 401 KAR 60:560 (40 CFR 60 Subpart DDD), Standards of Performance for VOC Emissions from the Polymer Manufacturing Industry - This regulation only applies to facilities that produce polypropylene, polyethylene, polystyrene, or polyethylene terephthalate. The permittee does not produce any of these polymers and exempt from this standard.
4. Regulation 40 CFR 60 Subpart OOO. Source has capacities, as defined in 40 CFR 60.671, of 23 megagrams per hour (25 tons per hour) or less;
5. Regulation 40 CFR 60 Subpart WWW, Standards of Performance for Municipal Solid Waste Landfills - The permittee does not operate any municipal solid waste landfills on-site and is exempt from this standard.

b. NESHAPS:

1. Regulation 401 KAR 57:035 (40 CFR 61 Subpart V), National Emission Standards for Equipment Leaks (Fugitive Emission Sources) - The permittee is exempt from this regulation because the permittee does not operate any equipment in volatile hazardous air pollutant (VHAP) service as defined in this regulation.

SECTION J - NON-APPLICABLE REGULATIONS/REQUIREMENTS

c. NESHAPS for Source Categories:

1. Regulation 401 KAR 63:190 (40 CFR 63 Subpart I), National Emission Standards for Organic Hazardous Air Pollutants for Certain Processes Subject to the Negotiated Regulation for Equipment Leaks - This regulation only applies to facilities that produce one or more of the products listed. The permittee does not produce any of the products listed as an intermediate or for sale, is not a pharmaceutical producer and is exempt from this regulation.
2. Regulation 401 KAR 63:400 (40 CFR 63 Subpart Q), National Emission Standards for Hazardous Air Pollutants for Industrial Process Cooling Towers - This regulation does not apply because the permittee does not use any chromium-based water treatment chemicals for the cooling towers on-site.
3. Regulation 401 KAR 63:460 (40 CFR 63 Subpart T), National Emission Standards for Halogenated Solvent Cleaning - This regulation does not apply because the permittee does not use any of the listed chemicals as a solvent in parts washers
4. Regulation 40 CFR 63 Subpart Y, National Emission Standards for Marine Tank Vessel Loading Operations - The permittee only unloads material from its barge unloading facility and is exempt from this standard.
5. Regulation 40 CFR 63 Subpart DD, National Emission Standards for Hazardous Air Pollutants from Off-Site Waste and Recovery Operations - This regulation applies to facilities receiving off-site waste for treatment that contains greater than 500 ppm of hazardous air pollutants. The permittee does not receive off-site wastes in excess of this threshold and exempt from this regulation.